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A policy analysis of the 2014 Mexican soda tax

Ana Angela Carriedo Lutzenkirchen

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Declaration of candidate's role in the thesis

I, Ana Angela Carriedo Lutzenkirchen, confirm that the work presented in the thesis is my own. Where information has been derived from other sources, I confirm it has been indicated in the thesis. The entire thesis was designed, conceptualised, analysed and written by myself while I was pursuing the doctoral degree at the Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine (LSHTM). The study was mainly conducted in London, UK and some time in Mexico City, Mexico. Qualitative methods were applied by using interviews and documentary analysis. Interviews were conducted mainly in Mexico City. The informed consent and participant information sheets were approved and signed by the LSHTM Observational / Interventions Research Ethics Committee and by the Mexican National Institute of Public Health Research and Ethics Commission. The whole study course was supervised by Professor Karen Lock and Dr. Benjamin Hawkins, and by the advisory committee: Dr. Cecile Knai and Dr. Harry Rutter and Dr. Simon Barqura and Dr. Fabio Gomes.

Ana Angela Carriedo Lutzenkirchen

I confirm the accuracy of the above statement

27 November 2017

Supervisor: Professor Karen Lock

Abstract

Introduction: Mexico's prevalence of adult overweight and obesity is 72.5%, and 34.4% for school children. Mexico has one of the highest consumption of sugar-sweetened beverages globally. In 2012, during the transition to a new President, a new obesity strategy was proposed and developed. As part of this policy, a soda tax was implemented in Mexico in January 2014. The aim of this thesis is to explore how the soda tax emerged as a policy issue in Mexico and how stakeholders influenced its development and implementation.

Methods: Thirty-three semi-structured elite interviews were conducted with stakeholders involved in the obesity policy process. Interview data was triangulated with data collected through a documentary analysis, using a systematic search of a wide range of reports, policy and organisations documents generated before and during the soda tax design and implementation phases (January 2011 to December 2015). This resulted in the analysis of 145 documents. An iterative thematic qualitative analysis of both interviews and document data was conducted, guided by the policy network approach, framing theory and multiple streams theory.

Results: Many contextual factors were found to have facilitated the soda tax policy development including: the new government needing to find additional sources of revenue; increased public and government awareness of the high sugar sweetened beverage (SSB) consumption in Mexico, and its relationship to obesity and diabetes trends; greater influence gained by national NGOs through use of the media and supported by international organizations, use of existing national networks and new collaborations within Mexico. Some key relationships and links influenced the agenda setting for important policy issues. This included how conflict of interests, accountability, and representations in the formal policy process were managed. This revealed power imbalances around the policy debates and shifts in the attitude, responsibilities and actions of major actors. The Ministry of Health (MOH) and Ministry of Finance (MOF) were initially ambivalent and resisted development of a soda tax, not always being strong advocates as would have been expected. The formal policy design process followed a multi-stakeholder approach which actively involved the food and beverage industry (F&BI). They were able to influence policy actions to mitigate the soda tax impact on the F&BI, undermining some outcomes. Actions by other non-state actors (e.g.) to influence public perception about benefits and constraints of the tax included: the use of marketing strategies, calls for action using the media, framing of arguments as "the right to health" and "the multi-causality of obesity" rhetoric and implementation of

corporate social responsibility actions. The effectiveness of the soda tax was highly debated in public before and after implementation, resulting in public polarization. Until the soda tax emerged as a policy option, the influence of the F&BI on health policy had not been perceived as a conflict of interest or problematic and it continues to be ignored as such by some state policy actors.

Conclusion

This thesis contributes to the debate on how power is exercised, framed and shifted throughout the health policy process. It discusses the contextual factors that facilitated the soda tax development in Mexico, including how framing of evidence about obesity as a policy problem and possible solutions influenced the agenda setting. It identifies the key organisations and networks that were instrumental in policy making. This research provides evidence about how the F&BI have wielded their influence in regulatory actions within the national strategy for obesity prevention, and specifically the soda tax in Mexico. It highlights how the soda tax also brought about new opportunities for some actors framed around the issue of provision of safe drinking water. The soda tax resulted in the empowerment of advocacy groups and networks nationally supported by international actors, which was counter-balanced by new public-private partnerships and corporate social responsibility actions. This thesis demonstrates that corporate interests continued to have an influence on Mexican health policy after the introduction of the soda tax.

Acronyms Index

Acronyms of organisations, groups and actors cited in the thesis

Acronym	Spanish definition	English translation
AI	Instituto Aspen	Aspen Institute
AMD	Asociación Mexicana de Diabetes	Mexican Diabetes Association
AMENAC	Asociación Mexicana de Nutriólogos A.C.	Mexican Association of Nutritionists
AMP	Academia Nacional de Pediatría	National Academy of Paediatrics
ANM	Academia Nacional de Medicina	National Academy of Medicine
ANPDIAPAC	Asociación Nacional de Productores y Distribuidores de Agua Potable A.C.	National Association of Water Producers and Distributors
ANPRAC	Asociación Nacional de Productores de Refresco y Agua Carbonatada	National Association of Producers of Soda and Carbonated Water
ANSA	Alianza por la Salud Alimentaria	Alliance for the Healthy Eating
ARCA	Arca Continental S.A. de C.V.	Coca-Cola's Mexican and Latin-American distributor
BID	Banco Interamericano de Desarrollo	Inter-American Development Bank (IADB)
BP		Bloomberg Philanthropies
CCF	Coca-Cola Fundación	Coca-Cola Foundation
CIDCC	Centro de Innovación y Desarrollo Coca-Cola	Centre of Innovation and Development Coca-Cola
CIDE	Centro de Investigación y Docencia Económicas	Centre of Economic Research and Teaching
CN	Colegio de Nutriólogos	Nutritionists College

CNIAA	Cámara Nacional de la Industria Azucarera y Alcoholera	National Chamber of the Sugar and Alcohol Industry
COFEPRIS	Comisión Federal para la Protección contra Riesgos Sanitarios	Federal Commission to Protect Against Sanitary Risks
CONACYT	Comisión Nacional de Ciencia y Tecnología	National Commission of Science and Technology
CONAGUA	Comisión Nacional de Agua	National Water Commission
CONCAMIN	Confederación de Cámara de Industriales A.C	Confederation of Industry Chamber
CONDEBA	Consejo Nacional para el Desarrollo de la Educación Física y el Deporte en la Educación Básica	National Board for Development of Physical Education and Sports in Basic Education System
CONMEXICO	Consejo Mexicano de la Industria de Consumo A.C	Mexican Board of Industry of Consumer Goods
CP	ContraPESO	NA
CSO		Civil society organization
CSPI		Centre for Science in the Public Interest
EPC	El Poder de Consumidor	Consumers Power
F&BI		Food and Beverage industry
FAO		Food and Agriculture Organization
FEMSA Coca-Cola	Fomento Económico Mexicano S.A.B. de C.V	
FM	Fundación Mídete	Mídete Foundation
FMD	Federación Mexicana de Diabetes	Mexican Diabetes Federation
FUNSALUD	Fundación Mexicana para la Salud	Mexican Foundation for Health
IBSB	Instituto de Bebidas para la Salud y el Bienestar	Institute of Beverages for Health and Wellbeing
IDB	Banco Interamericano de Desarrollo	Interamerican Development Bank

IMCO	Instituto Mexicano para la Competitividad	Mexican Institution for Competitively
INAI	Instituto Nacional de Transparencia, Acceso a la Información y Protección de Datos Personales	National Institute of Transparency and Access to Information and personal data protection
INIFED	Instituto Nacional de la Infraestructura Física Educativa de Durango	National Institute of Physical Education Infrastructure Durango
INNSZ	Instituto Nacional de Nutrición y Ciencias Médicas Salvador Zuvirán	National Institute of Nutrition and Science Salvador Zuvirán
INSP	Instituto Nacional de Salud Pública	National Institute of Public Health
INTA	Instituto Nacional de Tecnología de Alimentos	National Institute of Food Technology
ITAM	Instituto Tecnológico Autónomo de México	Technical Autonomous Institute of Mexico
MA	MEXICANOS ACTIVOS	Active Mexicans
MDA	Asociación Mexicana de Diabetes	Mexican Diabetes Association
MoE*	Secretaría de Economía - SE	Ministry of Economy
MoEd	Secretaría de Educación Pública	Secretary of Public Education
MoF*	Secretaría de Hacienda y Crédito Público - SHCP	Ministry of Finance
MoH*	Secretaría de Salud- SSA	Ministry of Health
MoSD*	Secretaría de Desarrollo Social - SEDESOL	Ministry of Social Development
OECD	Organización de Cooperación y Desarrollo Económico	Organization for Economic Cooperation and Development
OMENT	Observatorio Mexicano de Enfermedades No Trasmisibles	Mexican Observatory of Non-transmissible Diseases
PAN	Partido Acción Nacional	National Action Party
PF	Fundación PepsiCo	PepsiCo Foundation
PM	Pacto por México	Pact for Mexico

PPP		Public Private Partnership
PRD	Partido Revolución Democrática	Democratic Revolution Party
PRI	Partido Revolución Institucional	Revolution Institutional Party
PT	Polithink	NA
SEDESOL*	Secretaria de Desarrollo Social	Ministry of Social Development (MoSD)
SEP	Secretaría de Educación Pública	Secretary of Public Education (same as MoEd)
SHCP*	Secretaria de Hacienda y Crédito Publico	Ministry of Finance (MoF)
SSA*	Secretaria de Salud	Ministry of Health (MoH)
SRA	Acciones de Responsabilidad Social	Social Responsibility Actions
UNAL	Universidad Autónoma de Nuevo León	Autonomous University of Nuevo Leon
UIA	Universidad Iberoamericana	Iberoamericana University
UNC	Unión Nacional de Cañeros	National Union of Sugar Cane Producers
WB	Banco Mundial (BM)	World Bank (WB)
WHO	Organización Mundial de la Salud (OPS)	World Health Organization
WOF		World Obesity Federation
WPHNA		World Public Health Nutrition Association

* both acronyms are used throughout the document

Acronyms used in text to identify actors on cited quotes

Acronym	Meaning
ACA	Academic
CSM	Civil Society Member
F&BIM	Food & Beverage Industry Member
MoHM	Ministry of Health Member
MoFM	Ministry of Finance Member
LEG	Legislator
MIM	Media Industry Member
TTM	Think Tank Member
IAM	International Agency Member

Acronyms of documents cited in text

Acronym	Spanish	English
ENPCSOD	Estrategia Nacional para el Control del Sobrepeso, Obesidad y Diabetes	National Strategy for Prevention and Control of Overweight, Obesity and Diabetes
NDP	Plan Nacional de Desarrollo	Mexican National Development Plan
FR	Reforma Fiscal	Fiscal Reform
ENIGH	Encuesta Nacional de Ingreso y Gastos de los Hogares	National Survey of Income and Expenses of Homes
ENSANUT	Encuesta Nacional de Nutrición y Salud	National Nutrition and Health Survey (NNHS)
AHSS		American Heart Association Scientific Statement

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Chapter 1. Introduction

The prevalence of obesity have been increasing globally over the last twenty years. According to a recent study age-standardised looking at population-based data sources from 186 countries, the mean BMI increased from 21.7 kg/m² in 1975 to 24.2 kg/m² in 2014 in men, and from 22.1 kg/m² in 1975 to 24.4 kg/m² in in 2014 in women (NCD Risk Factor Collaboration, 2016). Current estimates suggest that 1.9 trillion adults (38% of the world's adult population) and 41 million children under 5 are overweight (Hawkes, Demaio, & Branca, 2017; UNICEF, 2017). Worldwide concerns on the obesity 'epidemic' have led to several international policy calls to act upon rising rates of obesity, diabetes and other non-communicable diseases (NCDs) (Cecchini et al., 2010; Mozaffarian et al., 2012; Popkin, Adair, & Ng, 2012; WHO, 2013b). There have been many reviews of policy approaches that may be effective at tackling obesity including fiscal policies (subsidies on healthy foods, and levying unhealthy foods like high-caloric foods and sweetened beverages), marketing regulation for unhealthy food, food reformulation, food labelling, education on nutrition and physical activity, individual behaviour change interventions (Cecchini & Sassi, 2012; Novak & Brownell, 2012; WHO, 2013a), and improving water access in public spaces (Rivera-Dommarco, Hernández-Ávila, Aguilar-Salinas, Vadillo-Ortega, & Murayama-Rendón, 2012).

Defining what is meant by unhealthy food has been an ongoing debate among scholars and food producers, and it remains unclear in the context of overall dietary intake (Rayner et al., 2013; Rivera-Dommarco et al., 2012; Sacks, Rayner, & Swinburn, 2009). However, there is growing evidence, and international consensus, on the link between the high consumption of sugar-sweetened beverages (SSBs) and rates of obesity and diabetes (Ebbeling, Willett, & Ludwig D., 2012; Malik, Pan, Willett, & Hu, 2013; Slavin, 2012; Te Morenga, Mallard, & Mann, 2013; Vartanian, Schwartz, & Brownell, 2007). Sugar-sweetened beverages (SSBs) include not only sodas or carbonated beverages but also sweetened fruit drinks, sports drinks, energy drinks and sweetened coffees and teas. SSBs are a poor source of nutrients and contribute calories which do not have added value to health (Stern, Duffey,

Barquera, Rivera-Dommarco, & Popkin, 2012; Stern, Piernas, Barquera, Rivera, & Popkin, 2014).

Literature reviews on population approaches to improving diet and reducing obesity have suggested that taxing SSBs beverages is likely to be an effective policy option to reduce a population's caloric intake (Chaloupka, Powell, & Chriqui, 2011; Mozaffarian et al., 2012; Powell, Chriqui, Khan, Wada, & Chaloupka, 2013). Few countries have implemented, or have considered implementing a SSB tax, as it is a 'hard policy' which relies on statutory compliance. In contrast, 'soft policies', favoured by many government and industry actors, rely on voluntary agreements, industry self-regulation and compliance monitoring (Le Grand & New, 2015, pp. 26-27). From governments' perspective, both these approaches seek the similar outcomes but use different processes (Kennedy, Chan, & Fok, 2011), while soft policies are favoured by industry to avoid tougher regulations. Previously, national policies responses to tackle obesity and diabetes have largely taken the form of 'soft policies', such as education campaigns and voluntary actions (Swinburn & Wood, 2013). However, evaluations have shown they are ineffective and are driven by commercial interests rather than health interests (Hawkes & Lobstein, 2011; Knai et al., 2015b). Examples of voluntary policy actions on obesity include the EU Pledge, a voluntary industry action plan for marketing food to children, or the EU voluntary front-of-pack nutritional labelling using the Guideline Daily Amounts (EU Pledge, 2012, Updated July 2015). In Central and South America, 'hard policies' have been implemented, including the regulation of food labelling systems in Chile and Ecuador, which have warning labels on unhealthy foods, or Brazil's regulatory measures on food marketing (Camara, Marinho, Guilam, & Braga, 2008; PAHO, 2012; Perez-Escamilla et al., 2017). Other examples of regulatory initiatives include the added sugars content on food labels in the United States, and the regulation of food marketing to children the United Kingdom (FDA, 2016; Knai et al., 2015a). Few evaluations using empirical data have been published on the impact of 'hard' policies on obesity reduction (Lustig, Schmidt, & Brindis, 2012), however some case study evaluations have shown they have been effective in changing consumer behaviour (Colchero et al., 2015; Thow, Quested, et al., 2011; WHO, 2016a).

Food taxes are a potentially significant regulatory approach to tackle unhealthy eating, but they have not been widely implemented. Denmark, Norway, France, Hungary and some Pacific Islands (Fiji, Samoan, Nauru, French Polynesia) pioneered the implementation of food taxes (Cornelsen & Carriedo, 2015), although in the case of Denmark it has subsequently been removed (Bødker, Pisinger, Toft, & Jørgensen, 2015c; Snowden, 2013). Mexico was a front runner among low and middle-income countries (LMIC), and the first in Latin America to introduce a soda tax in 2013, becoming effective in January 2014. Other countries such as Chile, and recently Saudi Arabia and South Africa (Arab News, 2017; Ministerio de Hacienda, 2014a), have also implemented soda taxes. In the US, there is no national tax but several US cities have implemented their own tax including Berkley, California, Philadelphia (Purtle, Langellier, & Le-Scherban, 2017), and the United Kingdom has put forward a levy on sugary drinks which is yet to be implemented (Gov. UK, 2011). In contrast, several governments from high-income countries (e.g. Australia, New Zealand) and some others low and middle-income countries (e.g. Brazil, Colombia) have had national discussions but are struggling to get a similar policy on the agenda (Roache & Gostin, 2017).

I. Food and obesity policy in Mexico

In December 2013 Enrique Peña Nieto, the candidate of the Institutional Revolutionary Party (Partido Revolucionario Institucional - PRI) took office as President of Mexico. His party had ruled the country uninterruptedly for 71 years but lost power in 2002. After 12 years in opposition under the government of National Action Party (Partido Acción Nacional - PAN), Peña Nieto's PRI regained power and proposed a new policy approach. His overall plan for government was to implement what they called 'structural policy changes' largely related to economic stabilization (*Plan Nacional de Desarrollo*, 2013). This included a draft policy to tackle high obesity and diabetes rates, proposed in 2012 during the transition period before President Peña Nieto took office and launched in October 2013 (SSA, 2013b). This national regulatory initiative was called '*National Strategy to Prevent and Control Obesity and Diabetes*' (*Estrategia Nacional para la Prevención y el Control del Sobrepeso, la Obesidad y la Diabetes* - ENPCSOD) and included three

pillars 1) public health, 2) health care, 3) regulation and fiscal policy. It outlined three strategic pathways:

- a) Food advertising and marketing to children,
- b) A soda tax of 1 Mexican peso (MXP) per litre and a 'snack tax' of 8%, and
- c) A front of package food labelling strategy.

In February 2014 guidelines for regulating food marketing to children and the regulation for front of package food labelling were published. In January 2014 an excise tax (Impuesto Especial Sobre Producción y Servicios - IEPS) of 1 MXP per litre on sodas (including carbonated beverages, flavoured drinks containing sugar, and powders and concentrates to prepare sugary drinks) and an 8% tax on all snack foods with more than 275 kcal per 100g became effective.

II. Aims and objectives

The aim of this thesis is to analyse the emergence and implementation of the soda tax policy in Mexico. The thesis explores the contextual factors influencing this process, the policy process itself, and the role of key stakeholders in shaping the policy outcomes. This study highlights key aspects of the soda tax policy process in Mexico that may have implications for public health governance and on similar policies in other middle-income countries. To understand how the Mexican soda tax emerged and developed as a policy issue, a policy analysis was undertaken using a qualitative methodology. The specific objectives of the research are:

1. To understand the contextual factors that facilitated and constrained the development of the soda tax policy.
2. To analyse the policy-making process surrounding the soda tax as part of the national strategy to prevent obesity.
3. To map and explore the stakeholders' position and influence on the soda tax.
4. To examine how actors attempted to influence the design, implementation and early outcomes of the soda tax policy.

The regulatory actions introduced in the national obesity strategy, ENPCSOD, are poorly understood and warrant further analysis. Analysing the whole strategy with its broad range of policy interventions goes beyond the scope of this research. Therefore, the analysis presented below focuses on one key aspect of the strategy: the soda tax. This particular policy has been chosen as the soda tax is a relatively novel policy and has been highly politicised due its implications for the corporate food and beverage sector.

III. Rationale of research and methodological approach

Several factors that led to the soda tax policy need to be better understood. First, how the context influenced the policy change and set the scene for the processes and action which took place. For example, whether the lack of potable water supply by the state contributed to the increased sales of SSB and sodas, or if corporate economic interests of soda producers outweighed public health policy responses in Mexico regardless of the soda tax policy measure (A.P., 2013; Clark, Hawkes, Murphy, Hansen-Kuhn, & Wallinga, 2012; D Stuckler & McKee, 2012). Second, how links between actors influenced the policy design and the policy outcome. Third, how particular strategies were used to influence the policy process and to adapt to it.

By exploring and understanding better the mentioned issues, evidence will be generated about a policy that, from a public health perspective, aims to safeguard the health of Mexicans. This work will help to reflect on the advantages and disadvantages that this policy has in a specific context, so that they can be considered in similar contexts in the future. Health taxes, and particularly soda taxes are gaining momentum around the globe, but particularities about empirical applications are not yet broadly documented.

A policy analysis is the approach to research. Policy analysis does not have any specific approach, and it can use different lenses (Parsons, 2005; Spicker, 2008). To do so, this thesis uses a complementary approach to theories relevant to the policy process. It uses a qualitative methodology by applying interviews to key stakeholders, and a documentary analysis to triangulate accounts and to have a

broader understanding on how the process occurred, who was involved and how the policy developed.

This thesis provides insights and lessons learned from the introduction of a health tax in a LMIC. Finally, as the global momentum for sugar reduction increases, governments and public health advocates need better understanding of the implications of the soda tax, as a potential intervention to tackle further the economic, social, and situational drivers of soda consumption (Roache & Gostin, 2017).

IV. Positionality

This thesis was originally motivated by two main reflections during my work as a public health nutrition researcher working at the National Institute of Public Health. In this role I provided evidence and advice to advocacy and civil society groups supporting the regulation, and to the Senators' teams that drafted the soda tax policy starting in June 2012. This helped me reflect on the observed participation of Mexican civil society during the policy process, and the interest and focus of international policy and academic organisations to the soda tax development in Mexico. Additionally, it is based on reflecting on what I observed as a former participant compiling and presenting evidence for the soda tax to various policy actors involved which motivated my interest to explore this topic in depth.

V. Structure of the thesis

Chapter 2 presents an overview of obesity as a policy issue and population-level approaches to tackling obesity. It presents an overview of the evidence on food taxation policies including taxation of sugar sweetened beverages. Chapter 3 presents the theoretical framework and methods used, and discusses their limitations, and quality assurance considerations. Chapter 4, examines the context in which the Mexican soda tax was developed and implemented, including the prevalence and determinants of obesity, the political and economic situation of the country; and structural factors such as availability of potable water. It includes

sections on international trade agreements, the market for SSBs and the existing policies related to obesity and health.

Chapters 5, 6, 7, and 8 present the findings of this research. Chapter 5 presents the key actors involved in the soda tax policy process, how they link to each other and how these networks might have influenced the soda tax development and outcomes. Chapter 6 presents an analysis of how obesity was framed as a policy problem, and the policy solutions which emerged from these framings. It also presents the arguments used by policy actors for and against the soda tax, before and after the soda tax was implemented. Chapter 7 analyses the policy design and agenda setting, focussing on the participation of non-state actors in the policy formulation process, led by the government. Chapter 8 analyses the main actions shaping the implementation used by non-state actors that were taking place parallel and after the policy formulation, either to influence the proposed policy or to adapt to it and their underlying interests. Finally, Chapter 9 presents the discussion of the findings and the main recommendations which emerge from these.

Chapter 2. Obesity trends, causes and policy responses

I. Introduction

This chapter presents the obesity crisis, as well as the background for the soda tax policy. First it gives an overview of the prevalence of obesity globally. Second, it discusses the aetiology of obesity and the major risk factors associated with it, including evidence on the effects of sugar-sweetened beverage (SSB) consumption. Third, it summarises some of the population-level approaches and international policy initiatives proposed to tackle obesity, and presents an overview of the evidence supporting health taxes on food and beverages. Fourth, it discusses considerations that have been considered when designing a health tax. Finally, this chapter presents examples of countries which have applied health taxes, and a summary of the emerging evidence on the effectiveness of health-related food and beverage taxes on health and other outcomes.

II. The burden of obesity

Obesity trends

Currently, LMICs suffer 80% of the total burden of non-communicable diseases (NCDs) worldwide (WHO, 2008, 2014a). These diseases include diabetes, cancer, cardiovascular diseases, and chronic respiratory diseases. According to the World Health Organization (WHO) in 2008, of the 57 million deaths that were registered globally, 36 million (63%) were attributed to NCDs, and almost 28 million occurred in low- and middle-income countries. It is estimated that at least 3.4 million of these deaths were the consequence of having an increased body weight (WHO, 2008).

The WHO defines overweight and obesity as ‘abnormal or excessive fat accumulation that may impair health.’ The most widely recognised measure of overweight and obesity is the body mass index (BMI) which is calculated as an individual’s weight in kilograms divided by the square root of their height in metres (kg/m^2). The general guideline to identify when a person is overweight is a BMI between 25 and 29.9, and obesity is defined when a person’s BMI is above 30 (WHO,

2008). Being obese can lead to metabolic abnormalities that contribute to cardiovascular disease, diabetes mellitus, hypertension, some types of cancer and other chronic diseases (Grundy, 1998; WHO, 2004, 2008). Obesity has been estimated to lead to higher health service costs (Cecchini et al., 2010; Hernandez-Licona, Minor, & Aranda, 2012). Considering the relationship between obesity and multiple chronic diseases, the cost of obesity has been rising for countries at all levels of economic development (Cecchini et al., 2010; Sassi, Cecchini, & Devaux, 2012).

During the past 20 years, obesity prevalence has increased rapidly worldwide (NCD Risk Factor Collaboration, 2016). In 2014, it was estimated that 1.9 billion adults older than 18 years were overweight, and of these over 600 million were obese (WHO, 2016b). Overall global obesity prevalence was 10% in women and 14% in men (WHO, 2016b). The WHO also estimated that 41 million children under five years worldwide were overweight and, of these, at least 30 million were living in developing countries (WHO, 2016b). However, the highest regional prevalence was in the WHO Americas region with 62% prevalence of overweight and 26% obesity prevalence in adults. Recently a report found that for 2016 obesity rates in children and adolescents younger than 19 years are 6% in girls (50 million) and nearly 8% in boys (74 million). Combined, the number of obese five to 19 year olds rose more than ten times, from 11 million in 1975 to 124 million in 2016 (Abarca-Gómez et al., 2017).

The aetiology of obesity

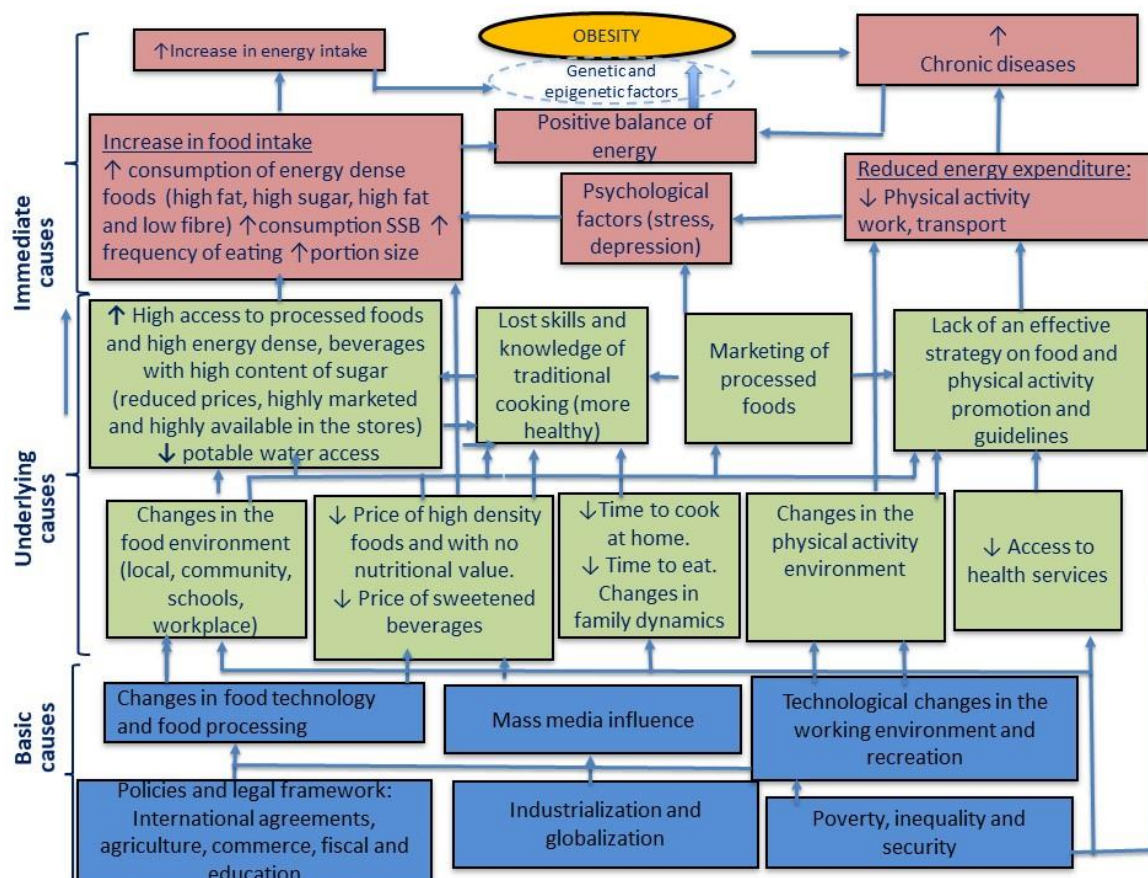
Obesity is caused by multiple factors, including genetic, physiological, environmental and economic factors, which relate to each other in a complex way. Different authors have created frameworks of the causal path of obesity to illustrate its complexity (Swinburn et al 2011; Hawkes, 2007; Popkin, Adair, & Ng, 2012; Rivera & Barquera, 2002,). These frameworks also highlight the importance of context, emphasising the interaction of political, social and individual factors in shaping the prevalence of obesity (Grundy, 1998; Lang & Barling, 2013; Popkin et al., 2012; Rivera & Gonzalez de Cossio, 2013).

Given the importance of context, this research employs Rivera and Gonzalez de Cossio's explanatory model of the main causes of obesity (Rivera & Gonzalez de Cossio, 2013) instead of other more well-known models because this framework was developed particularly for the Mexican context (James, 2008; Lang & Rayner, 2007; Ulijaszek, 2007). Some of the specific contextual factors which are relevant to this research include poor water quality and lack of free drinking water, the free-trade agreement with the USA and Canada, and trade policy loopholes allowing import of any food and commodity from the USA (Clark, Hawkes, Murphy, Hansen-Kuhn, & Wallinga, 2012).

According to Rivera's model the causes of obesity are divided into either basic, underlying or direct causes (Rivera, Perichart, & Moreno, 2012). *Basic* causes are factors that fall into the macro-level of the society's organisation (cultural values, customs, and laws). *Underlying* causes are derivations from this macro-system and part of the micro-systems (for example, the immediate surroundings of the person) and meso-systems (connections between microsystems). Finally, *direct* causes are related to individual behaviour (McLaren & Hawe, 2005).

The basic causes are associated with technological changes, political agreements (agriculture, trade, and marketing), industrialisation and communication, the legal framework and poverty. The underlying causes may arise from political and population sources. Political and regulatory factors include lack of access to safe drinking water and to healthy foods as well as low prices and extended availability of high-density foods and sweetened beverages (Digest, 2014). Population factors concern people's behaviour and changes in lifestyles such as the increase of sedentary activities, less time to cook, the influence of marketing and cultural changes in food intake, and reduced impact of current health promotion strategies on behavioural change (Rivera & Gonzalez de Cossio, 2013). Finally, Rivera's conceptual model refers to the direct causes of obesity that develop from the basic and underlining problems mentioned before. People tend to increase consumption of energy and limit their energy expenditure; therefore, a positive balance of energy results in overweight and obesity. Figure 2.1 shows the conceptual model.

Figure 2.1 Conceptual model of obesity aetiology with relevance to Mexico



Source: adapted from Rivera J. & Cossío T, 2013 (Rivera & Cossio, 2013)

Key risk factors for obesity

The World Cancer Research Fund (WCRF & AICR, 2007) and the WHO (2003) are two international sources who have summarised the evidence for obesity risk factors. These publications arranged risk factors into groups (convincing, probable, possible and limited evidence) based on the strength of their association with obesity and weight gain (WCRF & AICR, 2007; WHO, 2003). The main convincing factors that increase the risk of overweight and obesity are eating high-density foods and not being physically active. The reviews classified consumption of SSB and exposure to high levels of marketing of processed foods as probable risk factors for obesity and other cardiovascular diseases (CVDs). Since these publications, evidence on SSB consumption as a risk factor for obesity and diabetes has grown showing more convincing results (Ebbeling, Feldman, et al., 2012; Gibson, 2008; Harrington, 2008; Malik, Schulze, & Hu, 2006; Moise, Cifuentes, Orozco, & Willett, 2011).

As Rivera's model describes, political factors are underlying causes of obesity. In this thesis, they are described in relation to SSB consumption (including sodas) and to obesity in Mexico. The principle behind SSB taxation as a political strategy is to increase the price of a product in order to reduce its affordability, and therefore its consumption. Many political, economic and structural factors are related to this policy measure that go beyond this principle and need to be examined to understand the specific context of the case study of the soda tax in Mexico. This is further developed and analysed throughout this work in Chapters 4, 5, 6 and 8.

As the focus of this thesis is the tax applied to sugary drinks, the next section will describe existing evidence on the relationship of such beverages with obesity and diabetes, as this has been the main argument proposed for taxing them.

Sugar-sweetened beverage consumption as a risk factor

It is important to clarify that SSBs include not only sodas or carbonated beverages but also beverages such as fruit drinks, sports drinks, energy drinks and sweetened coffees and teas (Ebbeling, Willett, & Ludwig D., 2012). There is growing evidence of the relationship between SSB consumption and obesity, as well as the relationship of SSB consumption with diabetes. The WCRF had previously classified it as a probable cause of obesity in 2007 (Slavin, 2012; WCRF, 2007), with more recent reviews summarising evidence that SSB are a convincing risk factor for obesity (Malik, Pan, Willett, & Hu, 2013; Slavin, 2012; Te Morenga, Mallard, & Mann, 2013; Vartanian, Schwartz, & Brownell, 2007). Nonetheless, several statements by the soda industry, sugar producers, and organisations sponsored by food corporations in the past few years have continued to suggest that there is only weak public health evidence (Andreyeva, Long, & Brownell, 2010).

The health impact of excess SSB consumption, specifically related to type 2 diabetes, has been demonstrated in several cohort studies (Ebbeling, Feldman, et al., 2012; Palmer, Boggs, Krishnan, Hu F, & Rosenberg, 2008; Slavin, 2012; Te Morenga et al., 2013). Most of the evidence from cohort studies comes from the US. For example, the Nurses Health Study that followed more than 50,000 women for eight years showed that women consuming one or two portions of SSB daily had an increased adjusted relative risk of 83% (CI [1.42, 2.36], $p < .001$) for diabetes than women

consuming less than one SSB per month (Schulze et al., 2004). The Health Professionals follow up cohort study following 40,000 men for 20 years indicated that consumption of SSB was associated with a 24% (CI [1.09, 1.40], $p < .01$) increase in diabetes, after adjusting for confounders such as use of vitamins, family history and other health outcomes (de Koning L, 2011). A study of African-American women in the United States showed similar results, where the consumption of two or more SSBs per day was associated with an increased rate ratio of 24% (CI [1.13,1.52]) for type 2 diabetes compared with non-drinkers (Palmer et al., 2008).

In a number of randomised controlled trials (RCTs) and intervention studies with children and adolescents published since 2012, the substitution of SSB for other non-sugary drinks has shown positive changes on body weight (Ebbeling, Feldman, et al., 2012; Koning, Malik, Rimm, Willet, & Hu, 2011; Ruyter, Olthof, Seidell, & Katan, 2012). An intervention study (Ruyter et al., 2012) with 641 school children demonstrated that replacing a SSB for a non-sugary drink among the intervention group (104 kcal/day less) for 18 months resulted in less weight gain on average in the intervention group (6.3 kg) than in the control group (7.37 kg), a difference of 1.07kg , 95% CI (-1.54. -1.48). Other RCTs have shown the same relationships; for example, Ebbeling, Feldman et al (2012) showed that, after one year, between SSB consumers versus not consumers, there were significant differences between groups for changes in BMI of almost half BMI point (-0.57 , $p = .045$) and weight, with a mean reduction of almost 2kg (-1.9 kg, $p = .04$) (Ebbeling, Feldman, et al., 2012).

Five recent systematic reviews and one meta-analysis have updated the evidence, showing a positive relationship between SSB and increase in weight or BMI (Gibson, 2008; Malik et al., 2013; Malik et al., 2006; Te Morenga et al., 2013; Vartanian et al., 2007). Gibson found 12 out of 27 cross-sectional studies showed a significant positive association between SSB and BMI or weight gain, and of the longitudinal studies reviewed 8 out of 17 showed positive associations between SSB consumption and BMI or weight gain in at least one subgroups (Gibson, 2008). Maliki's meta-analysis found that of 32 studies, 20 in children (15 cohort studies, and 5 trials) and 12 in adults (7 cohort and 5 trials) found positive associations of SSB consumption and BMI or weight in both adults and children (Malik et al., 2013). These results supported a previous systematic review of 30 publications (15 cross-

sectional, 10 prospective and 5 experimental studies) finding experimental evidence indicated the same type of association (Malik et al., 2006). Te Moregan (2013) reviewed 30 trials and 38 cohort studies and found that among adults with ad libitum diet those with a reduced consumption of sugars were associated with a decrease in body weight of approximately 800g, while the opposite was also observed: as consumption of sugars increased, an increase of approximately 750g in body weight was observed. A meta-analysis of Vartanian et al. (2007) found an association of SSB consumption and increased energy intake and body weights and a decrease of milk consumption impacting on calcium intake. However they mentioned that some studies that had funding from the food industry reported smaller effects (Vartanian et al., 2007). Massougbdji et al. (2014) assess the quality of evidence 7 years later, and concluded on the causal relation between SSB consumption and body weight. Of 5 meta-analysis, 3 qualitative systematic reviews and 12 qualitative non-systematic reviews, they found that four received funding from the food industry. Using a scoring system with a Likert scale to assess quality of the evidence, they found that the causal consumption of SSB consumption and weight was positive. They found that four studies received funding from the food industry and those were more likely to suggest the causal relationship was weak, pointing out it was relevant to minimize threats to scientific objectivity and quality of research (Massougbdji, Le Bodo, Fratu, & De Wals, 2014) , and concurred with findings from Vartanian et al (2007) published 7 years earlier, who found that on average the over effect size for industry funded studies was significantly smaller than the average effect size of non-funded studies. Additionally, they found the quality of the systematic reviews had some mistakes in the analysis: the relative weight given to certain studies, inadequate statistical power, and adjusted coefficients due to total energy consumption, and the effect of SSB contribution on total energy consumption (Massougbdji et al., 2014).

III. Population approaches and policy actions to tackle obesity

As the evidence of environmental factors influencing obesity has strengthened in recent years, academics and international organisations have called for governments to take a range of policy actions (Mozaffarian et al., 2012; OECD, 2010b; WB, 2011; WHO, 2004, 2007b, 2008, 2012). However, only in the past 6

years fiscal policies that change prices such as taxing or subsidising foods have emerged (Cecchini et al., 2010; Sassi, Cecchini, Lauer, & Chisholm, 2009; WHO, 2016a).

In particular, three publications from international organisations influenced the development of a Mexican strategy to tackle obesity (SSA, 2013b). The first was a scientific statement issued by the American Heart Association, advocating a public health approach (Mozaffarian et al., 2012); the second was a report by the Organization for Economic Co-operation and Development (OECD) (Sassi et al., 2012), with an economic evaluation approach; and the third was a set of recommendations outlined by the WHO in the past decade urging governments to promote responsible marketing of foods and non-alcoholic beverages to children, in order to reduce the impact of foods high in saturated fats, trans-fatty acids, free sugars, or salt' (WHO, 2008, p. 20).

The American Heart Association Scientific Statement (AHSS) called 'Population Approaches to Improve Diet, Physical Activity, and Smoking Habits: A Scientific Statement From the American Heart Association' was published at the beginning of 2013 on behalf of several organisations, including the Council on Epidemiology and Prevention, Council on Nutrition, Physical Activity and Metabolism, Council on Clinical Cardiology, Council on Cardiovascular Disease in the Young, Council on the Kidney in Cardiovascular Disease, Council on Peripheral Vascular Disease, and the Advocacy Coordinating Committee. The AHSS reviewed the evidence on population approaches aimed at improving diet, physical activity, and smoking. It provided a framework for policymakers and advocacy groups to better translate evidence into action (Mozaffarian et al., 2012). The document summarised the consensus on the evidence for (a) media and educational campaigns; (b) labelling and consumer information; (c) taxation, subsidies and economic incentives; (d) school and workplace approaches; (e) local environmental changes; and (f) direct restrictions and mandates. A number of the reviewed studies suggested that media and educational campaigns or labelling were less effective in lower education or minority subgroups. However, direct restrictions and mandates, such as restricting unhealthy foods in schools or workplaces, appear especially promising for influencing the entire population, while also having an effect on reducing inequality.

For taxation and subsidies on foods evidence was more consistent in suggesting stronger effects in youth or lower-income or disadvantaged populations (Mozaffarian et al., 2012).

The 2010 OECD report published the results of an economic evaluation conducted by the OECD to outline the benefits of group interventions and policy interventions to tackle obesity (Sassi, 2010). It specified the cost-benefit of each intervention and the cost-benefit of a group of interventions for each OECD country member. For example, the assessment for Mexico demonstrated that the best obesity prevention programs that could be implemented for improving DALYs were: (a) counselling provided by a physician and dietician with 150,000 DALYs per year; (b) physician counselling alone, with less than 40,000 DALYs per year; (c) fiscal policies; (d) food and beverage marketing regulation; (e) interventions at workplace; (f) food labelling; (g) information campaigns; (h) self-regulation of food marketing; and (i) school-based interventions (OECD, 2010a).

According to the OECD, individual prevention programs in Mexico could avoid 47,000 deaths by chronic disease, but a comprehensive prevention strategy could prevent 55,000 deaths, with a cost of 12 USD per person (OECD, 2010a). The approach recommended tackling the ‘root causes of obesity and overweight’ (as framed by the authors) by implementing a set of comprehensive strategies involving all key stakeholders and communities. The main strategies implemented internationally include:

- Health education and health promotion (mass media campaigns, school-based interventions, and worksite interventions)¹⁻⁴;
- Legislation to promote breastfeeding⁴;
- Regulation of food advertising to children¹⁻⁴;
- Mandatory nutrition labelling¹⁻⁴;
- Counselling of individuals at risk in primary care¹⁻⁴; and
- The use of taxes on unhealthy food and sweetened beverages¹⁻⁴.

(¹Cecchini et al., 2010; ²Mozaffarian et al., 2012; ³WHO, 2010a, ⁴2014b)

The WHO has published several calls for actions to all governments to implement programs and policies to tackle NCDs and associated risk factors. These recommendations have been updated and discussed on a regular basis by the WHO members, as well as with the public through open consultations (WHO, 2014c; WHO & FAO, 2014).

The first document published by the WHO to address diet and nutrition for NCDs was the Technical Document on Diet, Nutrition and the Prevention of Cardiovascular Diseases, published in 2003 followed by the Global Strategy for Diet, Physical Activity and the Prevention of Chronic Diseases, published in 2004. The first document contained all the evidence and suggested action that relates diet and physical activity with NCDs. Further, it outlined some prerequisites for effective strategies, such as improving research and increasing public resources for this matter (WHO, 2003). The second document urged the Member States to ‘develop, implement and evaluate actions recommended in the Strategy, and to promote healthy diet and physical activity to individuals and to the community to reduce the risk and incidence of NCDs’ (WHO, 2004). It was not until 2008 that a plan was published to implement the Global Strategy (WHO, 2004, 2008) called The Action Plan for the Global Strategy for the Prevention and Control of Non-Communicable Diseases 2008-2013.

In 2010, the WHO published its recommendations on marketing foods and non-alcoholic beverages to children. This document included specific policy recommendations to restrict any advertising of foods to children (WHO, 2010a). In 2013, the *Global Action Plan for the Prevention and Control of NCDs 2013-2020* was published by the WHO as an update of the 2008 document. It outlined a set of policy options for members of the United Nations. These policy recommendations were more comprehensive than the recommendations in previous documents. They included policies aimed at: (a) reducing salt intake, (b) replacing trans fats and saturated fats with unsaturated fats, (c) implementing public awareness programmes on diet and physical activity, (d) following the WHO recommendations on food marketing to children, and (e) managing food taxes and subsidies to promote a healthy diet (WHO, 2013a). This was the first time food taxes were

mentioned by the WHO explicitly in any of their written reports or resolutions (WHO, 2013a).

During the opening session of the 8th Global Conference on Health Promotion in Helsinki, Finland on June 2013, the WHO Director General Margaret Chan addressed the topic of health promotion, noting that ‘prevention must be the cornerstone of the global response to these costly, deadly, and demanding diseases’ and that ‘[their] root causes reside in non-health sectors. Collaboration among multiple sectors is imperative’ (WHO, 2013b). Here recommendations included the application of policy actions focused on social determinants. Above all, the chief executive of the WHO stressed avoiding food industry self-regulation and embedding goals for industry within government actions. The aim was to avoid the prioritisation of private economic interests over public interests in food policymaking: ‘the current threat now is not only Big Tobacco, but public health should also challenge the Big Food, Big Soda, and Big Alcohol. These industries threaten regulation and protect themselves using the same tactics’ (WHO, 2013c).

Over the years, the WHO’s recommendations concerning population approaches to reduce NCDs, including obesity, have changed in style. Previously, they were more general recommendations (WHO 2004) while recently they have become more specific, even suggesting several indicators for evaluation and monitoring policy actions to decrease NCDs (WHO, 2008, 2013a). Some of the recommendations were included in a framework of action at the second International Conference on Nutrition ICN2 (WHO & FAO, 2014), which is the United Nations’ goal of mobilising actions towards reducing hunger and improving nutrition globally (UN, 2016). Also, in 2016 the WHO published recommendations urging member states to include fiscal policies for sugary drinks on national agendas (WHO, 2016a).

These and other publications calling governments to act on NCDs and obesity published before 2012 influenced the Mexican obesity agenda, as will be discussed in Chapters 4 and 7 (Barquera, Campos, & Rivera, 2013; SSA, 2013b). The way in which such policy recommendations were used to frame arguments for and against the soda tax and to raise the issue on the policy agenda are discussed in Chapters 5 and 6 of this thesis as part of the policy analysis.

Health-related food and beverage taxes

Food prices play an important role in purchasing decisions. Research on the price of unhealthy foods and costs of diets has suggested that the healthiest diets cost double the price of the least healthy diet in some countries (UK, US, South Africa) (Drewnowski, 2009; Jetter & Cassady, 2006; Morris, Hulme, Clarke, Edwards, & Cade, 2014; Rao, Afshin, Singh, & Mozaffarian, 2013; Temple, Steyn, Fourie, & De Villiers, 2011). In the United Kingdom the price of unhealthy foods has decreased over time, while the gap between the price of healthy and unhealthy foods has widened (Jones, Conklin, Suhrcke, & Monsivais, 2014). The rationale for using price interventions on food and beverages lies in the ability to change consumption, decrease the gap of prices between unhealthy and healthy foods, and decrease the incidence of NCDs related to diet (Capacci et al., 2012; WHO, 2016a). Subsidising healthy foods like fruits and vegetables or taxing unhealthy foods such as saturated fat have been considered as public health interventions.

Evidence about the effects of taxing health-related products, such as tobacco, alcohol and unhealthy food and beverages, has suggested that this approach can be a powerful tool for health promotion. However, arguments for and against health-related fiscal measures have been contested in the media, in academic publications and by policymakers. The main argument in favour of fiscal measure is that they attain public health objectives using a population level approach which is straight forward to implement. The main arguments against are concerns about possible substitution effects (especially for SSBs), the fact that such taxes are regressive (they affect people with low incomes more severely than people with high income) and that demand is inelastic (an economic term used to describe the situation in which the quantity demanded or supplied of a good or service is unaffected when the price of that good or service changes). These arguments are explained ahead and throughout this thesis as they are considered as some of the main narratives in the policy debate for soda taxes.

Health taxes can potentially have both positive and negative effects. Because both modelling studies and empirical evaluations have produced conflicting results, policymakers need to consider several factors when designing a health-related

commodity tax. Some of these considerations include the amount of the tax, how to frame the aim of the tax and the context in which the tax was designed and implemented (Bødker et al., 2015c; Wright, Smith, & Hellowell, 2017).

Designing health-related food and beverage taxes

The main consideration when designing health-related food and beverage taxes is the scope of the tax. A distinction can be made between taxes on individual products and taxes on ingredients. For example, for SSB's the tax could be imposed on drinks with added sugars, or it could be imposed on sugar as an ingredient (as is the case in Norway). Between the two options, there is a trade-off between the ease of implementation, administration, and its effectiveness. A tax on a specific product (e.g. SSB) is easier to determine and administer but, since there will be alternatives that are not taxed but still have a high sugar content, substitution to untaxed products is likely (e.g. natural juices or sweet foods in general). Conversely, taxing added sugar as an ingredient brings a significant administrative burden as it affects a large range of products, but its health effect will be larger as substitutions are less likely to occur because the price of all products containing sugar increases (Harding & Lovenheim, 2014; Sassi, Belloni, & Capobianco, 2013).

The next consideration is the type of tax to apply. A health-related food or beverage tax is an indirect tax. It could be either as a Value Added Tax (VAT) or as an excise levy. The discussion is to consider between increasing the rate of an existing Value Added Tax (VAT) or introducing an excise levy that can be in addition to an existing VAT on the product. VAT is applied *ad valorem*, proportional to the sales price of the product, meaning that the value of the tax is smaller if the price of the product is lower (Chaloupka, Powell, & Chriqui, 2011; Chaloupka, 2012; Chaloupka, Yurekli, & Fong, 2012; Cornelsen & Carriedo, 2015). An excise is applied to a product when manufactured, rather than at the sales point (as the VAT), but the producer can recover by raising the price to the buyer. Excise levy can be applied in addition to a VAT, and it is typically a 'per unit' tax, costing a specific amount per volume or unit of the item purchased. This type of tax is commonly used to raise government revenue and is levied upon goods for which demand is relatively less responsive to price changes and for which few substitutes exist. For example, tobacco, fuel and alcohol are all taxed via excise duty in addition to VAT. It is also argued that excise

duties correct negative externalities, or harm caused by consumption on third parties (Chaloupka et al., 2011; Chaloupka, 2012; Chaloupka et al., 2012; Cornelsen & Carriedo, 2015).

An excise duty is likely to have a larger impact on consumption as it is imposed on a unit of product (e.g. per litre of SSB) and at the same rate regardless of its price (e.g. branded and non-branded drinks would be taxed equally). As VAT is levied based on the product price, it incentivises purchases of larger quantities (e.g. the price per litre is typically lower for a 1 L bottle in comparison to 0.33 L bottle). Both types of taxes are regressive, but taxes based on volume of consumption, rather than value, have indicated they have a lower tax burden (Cornelsen & Carriedo, 2015; Sharma, Hauck, Hollingsworth, & Siciliani, 2014).

Finally, policymakers should consider whether the tax rate will change over time. The advantage of VAT is that it is already linked to inflation (Cornelsen & Carriedo, 2015; Sharma et al., 2014). An excise duty, linked to a unit of consumption, has to be indexed to inflation; otherwise, it will become less significant as prices rise. Furthermore, an excise duty can be introduced gradually, meaning that the tax rate is set to increase by increments for a number of years, a policy that has been applied to tobacco and alcohol products. Gradual implementation of the duty allows time for consumers to change their habits and soften the impact on households and businesses (Cornelsen & Carriedo, 2015; Sharma et al., 2014).

A model constructed to look at the potential effects of VAT on food consumption in the UK (Mytton, Gray, Rayner, & Rutter, 2007) examined three different types of food taxation schemes: (a) extending VAT to saturated fat (nutrient/ingredients of foods), (b) increasing VAT on foods treated as unhealthy by a nutritional score and (c) adding VAT to foods with high content of fat, salt and sugar. This model showed that food expenditure could increase by 3.2%, 4% and 4.6%, respectively, but the authors stated that 'taxing foodstuffs can have unpredictable health effects if cross-elasticity of demand are ignored'. For example, the model showed that all types of taxation predicted a reduction in fruit and vegetable consumption of approximately 2% to 4% due to cross-elasticity effects (Mytton et al., 2007; Nnoaham, Sacks, Rayner, Mytton, & Gray, 2009a). In contrast, the modelling study by Nnoaham et al.

for the UK using the Expenditure and Food Survey and the National Food Survey 1988-2000 showed reductions of 0.5% of energy intake, 2.4% of saturated fats, 2.3% of sodium and 2.7% of fruits and vegetables with a VAT of 17.5% on saturated fats (2009a).

As the tax is generally levied upon the producer or the seller, the impact depends also on whether the tax is passed through to consumers. Taxes can be passed on fully or be over-shifted or under-shifted. If the tax is over-shifted, the price increase passed on to the consumer is higher than the current tax. In the case of under-shifting, the tax is not fully passed on to the consumer. Over-shifting is likely to occur when the demand for taxed foods or beverages is inelastic (i.e. less price responsive), as for example has been observed in the case of alcohol taxes. In these cases, it is usual for companies to use this opportunity to coordinate price increases equivalent to the tax or greater as one of the main strategies to mitigate the tax impact on them but not on the consumer (WHO, 2010b). It has also been found that under-shifting is likely to occur for cheaper products and over-shifting for more expensive products as the price responsiveness varies depending on the price of the product (Ally et al., 2014). Prospective modelling studies generally assume that the tax is fully passed on to the consumers.

The use of taxes to prevent adverse outcomes (such as NCDs and obesity) must be close to the behaviour being targeted. For example, a levy aimed to reduce consumption of a certain food would have a higher impact if it were lower in the supply chain, such as at the point of purchase for the consumer (Cornelsen & Carriedo, 2015; Sassi et al., 2013; Wright et al., 2017).

Countries which have introduced food and beverage taxes

Only six national governments and one US city have passed legislation to use existing taxes for influencing food or soft drink consumption, or have introduced new taxes on foods or beverages. Table 2.1 summarises the places where taxes on unhealthy foods and beverages have been proposed or implemented. Taxes on commodities are seen as a source of fiscal revenues and a way to address consumption externalities (Sassi et al., 2013). However, in recent years, the policy emphasis has been increasingly placed on the potential health benefits. Excise and

duty are often related to changing behaviour and often referred as 'sin taxes' (Haavio & Kotakorpi, 2011). Finland is the only country where revenue collection is reported as the primary objective (ECORYS, 2014).

All food and drink taxes that have been implemented were excise duties except for those in Mexico, as the soda tax is a special type of excise called Special Tax for Products and Services (Impuesto Especial sobre Productos y Servicios- IEPS), and the snack tax uses a VAT rate. Hungary and Mexico have taxes on foods high in salt, sugar or fat content and on sugary drinks/soft drinks/drinks with added sugar. Finland has a tax on sweets, ice cream and soft drinks, whereas Norway, France, Chile, and the City of Berkeley (California, USA) have implemented taxes on soft drinks only (Wright et al., 2017). The UK has proposed a SSB tax to start in 2018 (Gov. UK, 2017). Other countries such as Saudi Arabia, South Africa, Australia, and the region of Catalonia in Spain are currently discussing the introduction of SSB taxes (Wright et al., 2017).

In many cases such taxes have been introduced against strong opposition, requiring strong political will. This can be a problem if there are changes in the government or in the political landscape in a country. For example, Denmark's tax on saturated fat was introduced in October 2011 following experts' recommendations (Bødker et al., 2015c), as a national survey suggested 79% of the Danish population was eating more than their recommended intake from saturated fat. The tax became effective in 2011, at was DKK 16 (2.9 USD) per kg of saturated fat. The tax was introduced as a government finance initiative rather than a public health policy. Initially it had a strong political support, but was highly contested by the food industry through the whole process (Bødker et al., 2015c). The tax was rescinded in 2013 because of sustained industry lobbying, a failure of political and public support and a lack of policy actors to defend the tax. The tax was contested by food industry actors using several tactics including threatening lawsuits, using media to predict negative consequences such as welfare or revenue losses, casting doubt on evidence for the tax, diverting focus by suggesting the tax should be placed on other products, and requesting postponement (Bodker, 2012). The tax also became highly unpopular publically as it was felt it led to inflation and high administrative costs, despite evidence using retail sales data that showed it only decreased sales by 0.9%

(Bodker, 2015). The main argument used to abolish the tax was to promote business and create jobs. Also argument about the lack of an effect on the consumption of saturated fat was attributed to Danish shoppers downgrading to cheaper brands from budget supermarkets, or increased cross-border shopping in cheaper countries (Bødker, Pisinger, Toft, & Jørgensen, 2015a). As Caraher et al argue, a new way of looking at policy formation is required in this and similar cases, and this includes addressing the power of corporate interests and the role of professionals in shaping or combating these influences (Caraher & Cowburn, 2015). The Danish debate was highly influenced by the agricultural and food industry which also affected public perception (Bødker et al., 2015c; Wright et al., 2017). Another similar case occurred in Finland, as the Finnish government rescinded a planned tax increment for 2015 in the sweets tax due to a complaint filed with the European Commission by the Finnish Food and Drinks Industries Federation calling into question the lawfulness of the tax, which has reportedly hindered the government in expanding the scope of the tax (Tettinen, 2014).

The amount of levies introduced varies between countries. Hungary has the lowest fiscal tax, while Finland has the highest (which is also progressive). Also the scope of the taxes (ingredients vs food/beverages) and the rates in each of the countries varies. In absolute values, and with the evaluations available from the current health tax interventions, Mexico has gained the highest income, as revenues doubled the expected, in the first two years (Wright et al., 2017)(Wright et al., 2017).

Table 2.1 Health-related food taxes implemented by 2014

Country	Year	What are taxed	Rate of tax	Type of tax and reasoning	Revenues raised
Hungary	2011	Foods high in sugar, fat or salt and sugary drinks	Soft drinks: ~£0.02 per/L Syrups or concentrates: ~£0.5 per/L Energy drinks: ~£0.64 per/L Pre-packaged sugary products: ~£0.33 per/kg Salty snacks (salt > 1g/100g): ~£0.64 per/kg Jam: ~£1.28 per/kg	Excise; public health/revenue for health services	2011: ~£8m 2012: ~£47m 2013: ~£46m
Denmark	2011 (abolished in Jan 2013)	Products with more than 2.3% of saturated fat (meat, dairy, animal fats and oils)	Saturated fat: ~£1.76 per/kg		~£115m; Estimated administrative cost ~£5m-19m
France	2012	Drinks containing added sugar or sweetener	Sugared and non-sweetened drinks: 2012: ~£0.057 per/L 2013: ~£0.058 per/L 2014: ~£0.059 per/L Energy drinks: ~£0.79 per/L	Excise, adjusted annually to inflation; public health and revenue	£268m
Finland	2011	Sweets, ice cream and soft drinks	Soft drinks; sweets and ice cream: 2011: ~£0.06 per/L; ~£0.6 per/kg 2012: ~£0.09 per/L; ~£0.75 per kg 2014: ~£0.17 per/L; ~£0.75 per/kg	Excise with gradual increase; revenue collection /public health	2011: £95m 2012: £129m 2013: £144m
Mexico	2014	Sugary drinks and high-calorie foods (e.g. chips, sweets, breakfast cereals)	Sugary drinks: £0.04 per/L High-calorie foods: 8% increase in VAT	Excise/VAT; health (2014)	2014: ~£1,252m (58% tax from sodas and 42% from high-calorie foods; (IMCO., 2015)
US, California, Berkley	2014	Sugar-sweetened beverages	~£0.24 per/L (City of Berkley Finance Department, 2014)	Excise; health	\$692,000 in revenues were raised in the first six month (Ng et al., 2015)
Chile	2014	Sugar-sweetened beverages	10% If >15g/240ml of sugar 18% (Ministerio de Hacienda, 2014b)	Excise; revenue, health	Not data yet
UK	2018	Sugar-sweetened beverages	Sugar content: < 5g per 100 ml 18p/liter < 8g per 100ml 24p/liter	Excise	*An estimated £520m a year (Triggle, 2016)

Sources other than specified:

- 1.Ecorys. Food taxes and their impact on competitiveness in the agri-food sector. Final report for DG Enterprise and Industry. 2014.
- 2.Ecorys. Food taxes and their impact on competitiveness in the agri-food sector. Final report for DG Enterprise and Industry. Annex - Case Studies in Member States. 2014.

Effectiveness of food and beverage taxes

To evaluate the effectiveness of taxes, the target outcome must be clearly established. The immediate responses are mainly a reduction in food/beverage

consumption, a decrease in expenditures on that particular good, and the income obtained by the tax. Current evidence on the effectiveness and impact of soda taxes is limited. Most evidence has arisen from modelling studies, but comprehensive reviews of empirical evaluations of implemented health taxes are not yet available. In 2009 a literature review of empirical evidence on food price sensitivity and weight outcomes, showed a statistically significant association between prices and weight changes, though the magnitude of the effect was small (Powell & Chaloupka, 2009). Sturm et al. also related the presence of existing taxes on products of vending machines with the BMI of adolescents controlling for socioeconomic status, gender and education, and found a weak association and a negative one when looking only at vending machines (Sturm, Powell, Chriqui, & Chaloupka, 2010). However, measuring the effectiveness of such taxes on health outcomes (such as prevalence of IMC, obesity and NCDs) is possible only after several years. Long-term and well-designed studies will be needed for inferring causality between taxes and health changes (Wright, 2017).

Evidence on effectiveness of food price interventions

Modelling and simulation studies on the impact of prices on food have suggested that an increase of prices on unhealthy foods and SSBs could reduce risk of obesity, and reduce health costs (Beydoun, Powell, Chen, & Wang, 2011; Finkelstein, Zhen, Nonnemaker, & Todd, 2010; Fletcher, Frisvold, & Tefft, 2010b; Sturm et al., 2010). Sturm et al. found that increasing state level taxes in the US by 1%, which were at the time less than 4%, did not substantially affect the levels of SSBs consumption in children, with an average reduction of 0.013 BMI (Sturm et al., 2010). However at-risk children (i.e. those who are overweight, come from low-income families, or are African American) were more sensitive than other children to soda taxes. Beydoun et al. (2011) examined the association of the price of fast-foods and the price of fruits and vegetables with dietary intakes and BMI among U.S. children and adolescents using data from the Continuing Survey of Food Intakes by Individuals from year 1994 to 1998. They found that in children between 2-9 y a higher price on fast-foods (by 1USD) was associated with lower intakes ($\beta \pm SE$: -0.9 ± 0.3 count/d), and an increased price of fruits and vegetables inversely related to fibre intake (β 6, SE: 23.3 6 1.5 g/d) and positively associated with BMI (4.3 ± 1.2 kg/m²) (Beydoun et al., 2011). These associations were almost equally balanced between low and high

income families. Finkelstein et al. studied the impact of targeted beverage taxes on higher and lower-income households using the Nielsen Homescan Panel on Food and Beverage Purchases 2006. They measured weekly purchases for a 12 month period. They assessed associations among beverage prices, energy intake, and weight using multivariate regression models and found 20% and 40% tax on SSBs would reduce beverage purchases by a mean (SE) of 4.2 (1.6) and 7.8 (2.8) kcal/d per person, respectively (Finkelstein et al., 2010).

Mytton et al. (2007) suggested that, a fat tax could produce a small change in food consumption and cardiovascular diseases (CVDs) or cancer, but only if accompanied with other measures to subsidise fruits and vegetables. Another modelling study found that taxing sources of dietary saturated fat in the UK is unlikely to reduce CVD or cancer mortality. If unhealthy foods are taxed and subsidies applied to fruits and vegetables by 17.5%, this could avert up to 2,900 CVD or cancer deaths yearly. The same study found that taxing 'less healthy' foods and using all tax revenue to subsidize fruits and vegetables could increase prevented deaths to 6,400 per year, but that any of these two options would be economically regressive, and positive health effects will not necessarily be greater in lower income groups (Nnoaham, Sacks, Rayner, Mytton, & Gray, 2009b).

Finally, food and beverage taxes may decrease costs associated with NCDs and obesity. Sanchez Romero et al. used the Cardiovascular Disease Policy Model-Mexico (a state transition model of Mexican adults aged 35-94 y), to project the potential future effects of reduced SSB intake by 10% on diabetes incidence, CVD events, direct diabetes healthcare costs, and mortality. They found that a 10% reduction in SSB consumption with 39% calorie compensation among Mexican adults over 10 y could save Mexico 983 million international dollars (95% UI \$769 million-\$1,173 million (2016). Expenditures were converted into 2011 US dollars using a purchasing power parity rate of 7.67 Mexican pesos = 1.00 international dollar, and inflated to 2012 currency using a 3.57% inflation rate (Sánchez-Romero et al., 2016).

A meta-regression analysing 136 studies to assess the effect of income levels between and within countries on the strength of the relation between food price and

demand, and predicted price elasticities adjusted for differences across studies, concluded that an increase in the price of all foods causes a major reduction in food consumption among poorer countries. For example, an increase of 1% on the price of cereals would reduce consumption by 0.61% (CI [0.56% to 0.66%]) in low-income countries and by 0.43% (CI [0.36% to 0.48%]) in high-income countries. Furthermore, price elasticity is more responsive in lower-income countries than in high-income countries for several types of foods, including meat, dairy products, cereal, and fish suggesting contextual conditions (economic and political) particular to the country might be associated (Green et al., 2013), as it has been suggested for the soda taxes (Thow, Heywood, Leeder, & Burns, 2011). In relation to foods' price elasticity of demand, defined as the percentage by which the demand changes in response to a 1% increase in price. The analysis found that in low income countries the lowest elasticities were for cereals (-0.43.-0.48) and fats/oils (-0.42, 95% CI -0.48 to -0.35); and the highest elasticities were for animal source foods such as meat (-0.78, 95% CI -0.83 to -0.73) and fish (-0.80, 95% CI -0.85 to -0.74) and dairy (-0.78, 95% CI -0.84 to -0.73); indicating people are more likely to stop buying this food if prices increase (Green et al., 2013).

Modelling effectiveness of sugar-sweetened beverage taxes

Several modelling studies have found a negative association between an increased price of SSBs and consumption of SSBs (Etilé & Sharma, 2015; Miao, Beghin, & Jensen, 2012), especially among heavy drinkers, concluding that an excise tax is effective for health purposes (Etilé & Sharma, 2015). Two studies from the US modelled an increase in the price of SSB and found it reduces SSB consumption (Andreyeva et al., 2010; Powell, Chriqui, Khan, Wada, & Chaloupka, 2013a, 2013b; Smith & Jukes, 1997). The first, by Powell, et al estimated the mean SSB price elasticity of -1.21 implied that a tax raising the price of SSBs by 20% (a penny per ounce) would reduce overall consumption of SSBs by 24%; it found that revenues from this tax in the US could generate 79 billion USD between 2010 and 2015 (Chaloupka et al., 2011; Powell et al., 2013b). Further, Andreyeva et al. (2010) found that an increase of 10 % in the price on soft drinks reduces their consumption by 8% and 10%. As mentioned by Chaloupka et al. (2011), 'assuming that it takes a reduction of 3500 kcal to reduce body weight by a pound (2kg), a daily deficit of 50 kcal could translate into significant losses in average body weight'.

In Mexico, two studies have reported on the possible elasticity and regressive nature of a tax on SSB. One study using empirical simulations with statistical modelling and sensitivity analysis using the National Survey of Household Living Standards found that price elasticity of sweetened beverages increases as the income of a population decreases (Cahuana, Rubalcava, & Sosa, 2012). The second study used two different surveys and found that sodas had an elasticity of -1.29 (SE 0.11) and -1.01 (SE 0.02), respectively, and both were significant at 1%. When dividing the population into three income subgroups, the elasticity was still significant among all income categories (Colchero et al., 2012).

Finally, two studies estimated the possible impact of soda taxes on obesity and diabetes. One study using data of the National Nutrition Survey 2012 estimated the average Mexican person's weight was 71.3 kg and could be reduced to 70.9 kg in 10 years with a soda tax of 10%, to 70.5 kg with a 20% tax, and to 70.1 kg with a 30% tax (Barrientos, 2013; Colchero et al., 2012). Additionally they estimated the current prevalence of adult obesity (34.1%) would decrease by 3% with a 10% tax, by 7% with a 20% tax, and by 8% with a 30% tax. For overweight, the current prevalence (35.6%) would fall by 3% with a 10% tax, by 5% with a 20% tax, and by 8% with a 30% tax. With a 30% tax, almost 10.5% of the adult population would reach a normal weight (less than 25 IMC) in 10 years (Barrientos, 2013; Colchero et al., 2012). In 2016 another study reported that with a decrease of 10% in SSB consumption and a 39% decrease in calorie compensation, would result in about 189,300 (95% uncertainty interval [UI] 155,400-218,100) fewer type 2 diabetes cases; 20,400 fewer strokes and myocardial infarctions; and 18,900 fewer deaths occurring in Mexican adults from 2013 to 2022 (Sánchez-Romero et al., 2016).

Empirical evaluation of food and soda taxes

Some countries have already implemented taxes; however, to date, few evaluations are available to document the impact of these taxes on consumption, body weight or other health outcomes (Falbe, Rojas, Grummon, & Madsen, 2015; Ng et al., 2015). In 2011 the Hungarian Parliament approved a tax on pre-packed foods containing high salt and sugar to be implemented in September of that year to tackle rising obesity

rates. When applied, Hungary estimated they would obtain revenues of about 20 billion Hungarian forints (€74 million), but no evaluation is available.

In Denmark, Smed et al. found that, while the tax on several high-fat products might have led to a decrease in demand, it was accompanied by a substitution effect with sugar (Smed, Jensen, & Denver, 2007). A recent evaluation of the tax demonstrated that, during its implementation, saturated fat consumption was reduced by 4.0%. Vegetable consumption increased, and salt consumption increased for most individuals, except younger females. Smed et al, also modelled a reduction in mortality with 123 lives saved annually, 76 of them below 75 years equal to 0.4% of all deaths from NCDs. Recently, a group of researchers found the fat tax affected consumption and health, though causality was not presumed (Smed, Scarborough, Rayner, & Jensen, 2016).

Finally, research conducted in the US offers a few examples of the possible effects of a SSB tax on body mass index (BMI), using the US states' taxation of soft drinks, and using a fixed effect framework methodology applied previously for tobacco taxes (Fletcher, Frisvold, & Tefft, 2010a; Fletcher et al., 2010b). Price had a statistically significant impact on behaviour and weight; however, the magnitude of the effect was small. An increase in the state soft drink tax rate of one percentage point led to a decrease in BMI of 0.003 points and a decrease in obesity and overweight of 0.01 and 0.02 percentage points, respectively (Fletcher et al., 2010a, 2010b). Short-term results are available from Berkeley, California, indicating that the first US 1-cent-per-ounce excise tax on the distribution of SSBs led to an increase in retail prices that affected Berkeley more than nearby cities that did not have the tax (Falbe et al., 2015), indicating the taxes were passed on to the retail price (Ng, et al 2015). In Mexico, evaluations of the soda tax have indicated varying results, as will be discussed in Chapter 4 of this thesis.

IV. Summary

This chapter highlights the current worldwide crisis of obesity. It presents the aetiology of obesity and discusses research linking obesity and diabetes to the consumption of sugary drinks. It also presents how international agencies and public health experts have called on countries to act upon the global obesity epidemic. The OECD, the American Heart Association and the WHO have provided recommendations influencing the development of a Mexican soda tax. The chapter also summarises the evidence from modelling studies related to the projected impact of soda taxes. It reflects how modelling studies have indicated that a minimum increase in price of 20% is needed to have an impact on obesity. Even though soda taxation has been implemented in some countries, there is little empirical evidence of the impacts. Some examples where this tax has already been implemented are presented with their main outcomes.

Chapter 3. Research methods

I. Introduction

This chapter describes the study design and the methodological approach used to answer the research questions. First, the selection of theoretical frameworks used for the research is presented. Second, the methods used and the data collection process are described. Third, the analytical approach and data analysis are set out, together with the ethical considerations involved in the conduct of this research and the data management plan. Finally, the main strengths and limitations of the data collection and analysis approaches are discussed.

To understand fully the complexities of the policy explained here, different theoretical frameworks were considered. The following section details how this case draws on a range of theoretical frameworks.

II. Theoretical framework

Policy theories and frameworks guide policy analysis (outlined in Table 3.1), and they enable to move from describing what happened during the process to explaining it and answering the question of why it happened (Cairney, 2013b; Howlett, Ramesh, & Perl, 2009, p. 17). The term 'theory' refers to as 'a set of analytical principles designed to structure our observations and explanations of the world' (Cairney, 2013b, p. 2); and the term 'framework' as 'one which identifies concepts and helps organise analysis and theoretical comparisons' (Cairney, 2013, p. 2) or 'a conceptualization that provides a set of variables and the relationships among them that presumably account for a set of phenomena' (Sabatier, P 207, p. 6). Both theories and frameworks aided to explain the empirical research of this thesis. For example, theories were used for analysing results (as detailed in page 61), and aspects of the framework developed by Ritchie and Spencer for conducting policy research, were used to design the interview guide (explained in page 59-60). Among other theories (Table 3.1) the framing theory was used for analysing results. This

theory helped to conceptualise and facilitate analysis of how policy actors engaged in the process of framing the policy problem and policy responses.

Within the social and political sciences, different theoretical frameworks exist, which help explain policymaking, as a complex process that spans levels of government, contextual settings, and geographical and socioeconomic conditions (Sabatier & Weible, 2014). As John (2013b, p. 483) argues, policymaking is complex owing to the interplay of several factors, including the role of institutions, policy networks, exogenous factors, choices made by actors; and ideas that guide their behaviour. All theories try to bring these factors together to explain the policy process, though some emphasize different factors or units of analysis (Cairney, 2013b; Howlett et al., 2009, p. 31; John, 2013b; Gill Walt et al., 2008). Theories sometimes overlap, yet they have different perspectives and provide different lenses to the policy process (John, 2013b, p. 12). Under this assumption, several theories and concepts used in this study will be introduced. Table 3.1 lists the theoretical frameworks used in this study, the main elements of each one, and how they were applied to drive the research questions and explain the findings.

The use of different theories affords several advantages. First, the 'multiple lenses' approach provides a more complete explanation of policy change. Not all theories focus on the same aspects of the policy process. Second, it provides more than one perspective and shows how different theories have comparative benefits. Third, it is useful to become more aware of the assumptions that support each theory. Finally, as mentioned by Cairney et al. (2012), it provides different answers to the same question and prompts us to seek more evidence. The purpose of using several theories or theoretical approaches to the data is to look in detail and through different lenses, the policy process and different parts of it, as the theories selected for this work do (see Table 3.1). For example, the Social Network Approach (SNA) strongly focuses on stakeholders' contacts, relationships, and dynamics and how these are either a part of structural factors (Rhodes, 1996, 2008; Rhodes & Bevir, 2003) or of agency in policy formulation and decision-making (Rhodes, 1996). In this research the SNA helped to guide and reflect both the structure of the relationships as part of the political context, and into how these relationships evolved or changed throughout time as part of the policy process and how they

reflected in the policy outcome. Other example is the advocacy coalition framework (ACF) which aims to analyse the effect of commonly represented beliefs (in coalitions) on policy outcome (Jenkins-Smith & Sabatier, 2013; Sabatier & Weible, 2014). By contrast, the Multiple Stream Theory (MST) considers stakeholders (in this theory called 'policy entrepreneurs') as part of the politics, problem identification, and building of policy (Marsh & Smith, 2000). For this thesis, the MST is also used to look in details to the politics behind the agenda setting, the problem identified and how the policy documents reflect those issues. And an additionally this work uses framing theory too. With this lens, the analysis looks in detail to the arguments about the policy problem and arguments used either to support or not the soda tax.

For instance, one of the main potential problems is the issue of epistemological compatibility; however, different approaches are available for combining theories. Cairney (2012) identifies three ways of combining different approaches: the 'complementary approach' which uses multiple concepts or theories to produce a series of perspectives with which to explain empirical outcomes; the 'synthetic approach' which is used to produce a theory or a hybrid theory, and the 'contradictory approach' which aims to relate each individual theory to its empirical research agenda and, for example, use it in a multiple-case study.

This thesis uses the 'complementary approach'. This approach was selected because it encourages to relate different understandings of the world whereas some difference in the meaning attached to key terms, it is manageable when we seek to compare a range of perspectives with this approach and, in doing so, recognize their different intellectual origins (Cairney, 2016, personal communication). Sometimes, combining several theories might imply a practical problem for the research design (Cairney, 2013b), though it is not the case for this project, as several theories were considered before selecting the ones that were used.

Table 3.1 Theories, frameworks, and models used for research, main factors; purpose of using it; and research questions addressed

Overall purpose of using it	Framework/theory/ model (authors)	Main aspects of the policy process examined	Rationale for use	Research question it helps to answer
Design tools/research questions	Elements considered for applied policy research (Ritchie & Spencer, 1994)	Contextual, diagnostic, evaluative, strategic elements.	To identify all parts to be included in the analysis.	NA
Categorize/organise material	Stages-Heuristic Model (Lasswell, 1956)	Five stages of policy process: problem identification, agenda setting, policy formulation, policy implementation, and policy evaluation.	To organise empirical data. To illustrate the process of the soda tax within a period.	NA
	Health Theory Triangle (Walt & Gilson, 1994)	Context, actors, content, process.	To identify all parts to be included in the analysis. To identify all factors and units of analysis needed for policy analysis.	NA
Analyses of empirical data	Policy Networks (Adam & Kirschen, 2007; Schneider, 2006; Tantivess & Walt, 2008)	Actors and networks	To describe interactions and interconnectedness between groups of actors. To explain actors' relationships and power, and the role of institutions in the case study.	(0.3) What were the positions and influences of key actors toward the soda tax policy? (0.4) What were the role of the actors in shaping the design and implementation of the soda tax?

	Multiple Stream Theory (Kingdon, 1984)	Agenda setting	<p>To explain the 'streams' that influence the agenda setting.</p> <p>To explain the process, actors (policy entrepreneurs), and agenda setting of the soda tax.</p>	<p>(0.1) What contextual factors facilitated or constrained this process in Mexico?</p> <p>(0.2) What was the process through which the soda tax became a policy option and part of the obesity strategy?</p>
	Framing Theory	Examines problem definition, agenda setting, policy design, and evaluation of results	<p>To describe policy actors' conceptualisation of 'the policy problem' and its solutions.</p> <p>To describe which ideas were promoted and judgements made throughout the design and implementation of the soda tax.</p> <p>To explain how actors perceive and talk about the policy and governance processes.</p> <p>To explain how the context of the Mexican situation is constructed by different actors.</p> <p>To explain the main objectives, assumptions, values, and the perceived impact of the soda tax regulation.</p>	<p>(0.1) What contextual factors facilitated or constrained this process in Mexico?</p> <p>(0.3) What were the positions and influences of stakeholders toward the soda tax policy?</p>

Selecting theoretical frameworks

Two main criteria were used for selecting the theories. First, the purpose of each theory was identified, as some of them are used only to classify information; others, to explain information; and still others, to predict information (Buse, Mays, & Walt, 2012b). Second, the type of theory or framework that could best address the research questions was understood. To explain the policy process of the soda tax, factors identified by Peter John (role of institutions, policy networks, exogenous factors, choices made by actors; and their ideas that guide their behaviour) were considered in this thesis (John, 2013b).

The aim was to explore what influences the policymaking process, including the values of the actor involved, and their choices as they are key determinants of how the policy process starts and evolves (Kingdon, 1995). For instance, as described in Chapter 6, the use of scientific evidence to inform policy decisions often becomes a political issue and not just a foundation for taking policy decisions (Stewart & Smith, 2015).

Furthermore, because the soda tax policy process is ongoing in Mexico, this project is what Buse calls a 'prospective policy analysis' (Buse, 2008, p. 325) or an account that considers politico-economic factors, forward-looking, real-time documentation, immediate lessons learned, and feedback on engendered strategies to engage in the policy process. It includes accounts before the policy was implemented and the immediate reactions after it became effective. It provides a set of snapshots of the 'period of major policy change' (Kingdon, 1995) in Mexico aimed at addressing obesity only 12 years after obesity and diabetes rates in Mexico attracted the attention of health researchers. Before going into details of how the theory has been applied in the empirical research, the next section explains all the elements and concepts considered in policy analysis.

Elements of policy process considered for analysis

This analysis considers certain elements of the policymaking process which have been suggested by scholars in the past to make it as comprehensive as possible under a defined scope. This section identifies such elements and sets their boundaries.

In the mid-90s, Walt et al (2008) noted that the assessment of health policy in middle- and low-income countries was mainly focused on technical content and design without explaining how and why certain policies succeeded and others failed. The authors also called for a new paradigm of thinking to be applied to health policy analysis to understand the factors that influence the experiences and results of the policy change (Gilson & Raphaely, 2008). For such an analysis, certain factors and concepts need to be considered, such as the policy 'process' and 'context' (Walt & Gilson, 1994); interaction of interests, ideas, and institutions (John, 2013a, pp. 12-13); actors and the way in which they relate to each other (Rhodes, 2008); the choices they make (Ostrom, 2007; Weible, 2014); the power and influence of such actors (Erasmus & Gilson, 2008; Reich, 1995); and other events where the policy takes place (Cairney & Heikkila, 2014, pp. 364-365). These concepts interplay in the policy process and in the choices and elections made to develop a policy and its content (Cairney & Heikkila, 2014). In addition to these concepts, a particular space is given to 'governance' in this thesis, as this concept is related to what scholars define as a 'new way of doing policy' (Peters & Pierre, 1998) where various actors stress the importance of networks, partnerships, and markets (Hufty, 2010). Governance comprises 'the complex mechanisms, processes and institutions through which citizens and groups articulate their interest, mediate their differences and exercise their right and obligations' (Siddiqi et al., 2009). As Siddiqi et al. suggest, governance is the 'least well-understood aspect of health systems' (Siddiqi et al., 2009, p. 14). As this research analyses networks during the soda tax policy and the influence of non-state actors, it is also relevant to consider aspects of governance, as it is a form of government into which citizens and groups are involved. Table 3.2 provides a brief description of each concept used in this thesis and a brief explanation of how it is used.

Table 3.2 Concepts considered for policy analysis, definition, and application in this thesis

Context	Context is the setting in which the policy process occurs. There are different contextual factors to consider when conducting policy analysis. They include historical traditions, socio-structural determinants, self-interest of politically powerful sectors, political system, institutions, influence of economic ideologies, logic of particular sequential processes, and various ad hoc considerations (Whitehead, 1990) (Walt & Gilson, 1994).	For this thesis, the context includes the change in government, how the centralized policy worked within policy reforms, and the framing actors apply to the political problem, along with the other factors described in Chapters 4 and 5.
Policy problem	The policy problem refers to the perception of an issue as a public matter requiring government action and is influenced by previous efforts of government to respond to the. government officials learn from them through feedback of existing programmes, pressure groups, or sudden crisis(Buse, Mays, & Walt, 2012a).	The problem identified in this thesis was the crisis of obesity Mexico had and the recent issues pointed out by pressure groups about the excessive sugary drinks consumption. These problems not always are perceived similar by all the actors involved in the policy process, so it is key to understand stakeholders' perceptions about the health issue discussed in this thesis.
Policy process	The policy process involves actors with different values involving spans of time, debates between policy actors, and complex structures (involving different levels of government) (Sabatier, 2007, p. 3).	One of the main aims of the thesis is to explain the policy process of the soda tax. It considers factors from the problem identification, agenda setting, and some of the main reactions to the policy change.

Actors	<p>Actors are all the institutions or persons representing an institution or an organisation that were involved in the policy process. During the policy process, numerous actors participate, though in practice, only those who are members of specific policy sub-systems tend to participate.</p> <p>Different theories use different names to refer to actors depending on their specific role in the policy process. For example: veto players, policy entrepreneurs, or interest groups (Howlett et al., 2009).</p>	<p>By focusing on actors, this analysis provides an overview of the political culture of the country. States and institutions interplaying in this case are influenced by public actions and other mechanisms as explained in Chapters 6 and 7 and, in turn, they provide the means through which these actions are sustained or modified (Gilson, 1994).</p>
Power	<p>Power is defined ‘as an actor’s ability to induce or influence another actor to carry out his directives or any norms he supports’ (Etzioni, 1961). Power is the ability to influence others by shaping their preference or the ability to achieve a desired action (Buse et al., 2012b; Galston, 2006; Lukes, 2005).</p>	<p>The use of power by several government and non-government actors in this case study is considered to explain to a certain degree how policy processes occur and how the power of some actors changes throughout the process. The theories selected for the analysis help to build on how groups of actors are portrayed as powerful or not by policy makers.</p>
Governance	<p>Governance refers to the mechanisms, processes, and institutions through which citizens and groups of actors articulate their interests, mediate their differences, and exercise their legal rights and obligations (United Nations Development Programme, 1997, p. 8). Or ‘the actions and means adopted by a society to promote collective action and deliver collective solutions in pursuit of common goals’ (Dodgson, Lee, & Drager, 2002, p. 6).</p>	<p>The dynamics of actors and their relationships are portrayed as a key part of the policy process and the governance process of the soda tax throughout the analysis.</p>

Institutions	Institutions are organisations, laws, and rules that are central to every political system or area in which policy-making is done (de Leon, 1991, pp. 5-6; John, 2013b, p. 39). Sometimes, certain institutions have an implicit group of norms of rules rather than an explicit form of them (Ostrom, 2007).	These elements are considered throughout the analysis. The change in some organisations, rules, and laws as well as ‘institutionalized’ frames of the problem and solution are explained in Chapters 5 and 6. In this case, the acquired power of civil society was fast; however, in some other cases, it might take years. As Carney mentions, ‘overall, past policies, based on rapid emotional judgements and policymakers’ values, provide key context for policymaking’ (Cairney, 2016). Under these assumptions, this concept is applied to explain the values and perceptions that lead and drive the soda tax in Mexico.
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Defining and explaining the concepts considered for this policy analysis sets parameters to explain findings and aid the analysis that may otherwise be unclear to the reader. This is particularly helpful as authors can attach ‘different meanings to the same concepts’ (Cairney, 2013a, 2013b; Cairney & Heikkila, 2014) and one must not assume that each theory refers to each term in the same way (Cairney & Heikkila, 2014). When developing the policy analysis and using different theories to explain it, defining concepts becomes particularly relevant, as noted in the previous section and as stressed by Cairney (Cairney, 2013b).

The following section describes how this empirical work used theory to organize and analyse the results. It addresses the different theoretical considerations made to include the concepts mentioned above.

Use of theory to organise units of analysis and temporality

To organise the information, the Health Theory Triangle (Walt & Gilson, (1994)) and the Stages-Heuristic Theory (Lasswell, 1956) was followed. The first one helped to map and classify all the factors influencing the soda tax policy, and the second one provided a simplification of the policy, as Schlacger describes it: ‘in a temporary and continuum of actions and decisions’ (Schlacger, 2007).

By using Walt and Gilson's Health Theory Triangle, several variables were considered: actors, context, processes in policy-making, and content of the policy. These variables were considered to 'achieve a comprehensive scope of the variables influencing the policy process' (Walt & Gilson, 1994).

Furthermore, Lasswell's Stages-Heuristic Theory divides the policy process into agenda setting (including problem identification), policy formulation, policy legitimation (adoption), policy implementation and policy evaluation, and policy change or termination (de Leon, 1991, p. 8). It was applied 'as a guide or image of the phases that any collective act has' (de Leon, 1991, p. 6). This proposal has been criticized since the early 90s for not meeting the criteria of a scientific theory, and it has been rejected as a useful approach either for developing a model or for proving any hypothesis (Sabatier, 2007, p. 8). Nonetheless, it is useful as 'it is not so easy to give such a straightforward approach as it is intuitive appealing; and also to help us identify what part of the stages we are focusing on' (Cairney, 2013a).

Additionally, four categories that Ritchie and Spencer (1994) identified were considered when developing the 'framework' analytical approach for applied policy research. These categories include questions about the contextual, diagnostic, evaluative, and strategic areas of the policy being studied. Previous work on food policy analysis has considered them irrespective of using the framework as an analytical approach in the methodology (Milo, 1990; Seed, 2011). For this research, these categories were included when designing the semi-structured interview topic guide, and they are described in Table 3.3.

Table 3.3 Elements considered for the semi-structured interview guide adapted from Ritchie and Spencer's (1994) analytical approach for applied policy research

Category	Sample of questions (Ritchie & Spencer, 1994)	Questions used to guide semi-structured interview
Contextual	What are the dimensions and perceptions that are held?	Elements that operate within the system <i>e.g. How he/his organisation frames 'obesity' and/or 'soda consumption' and/or 'free drinking water'?</i>
Diagnostic	Why do particular needs arise? What factors underline particular attitudes and perceptions?	Beliefs and actions during the problem, policy formulation, and agenda setting. <i>e.g. How did he/his organisation perceive the soda tax? (positive/negative, and why?)</i> <i>Did they/he participate in any part of the process, and if so, how? What does he think of other actors?</i>
Evaluative	How are objectives achieved? How do experiences affect subsequent behaviour?	Beliefs and actions after the soda tax implementation. <i>e.g. Have you seen or perceived any changes related to water provision at schools?</i>
Strategic	What actions are needed to make it more effective?	Current plans/views/positions about the future of the soda tax in Mexico.

Adapted from 'Qualitative data analysis for applied policy research' by Jane Ritchie and Liz Spencer in A. Bryman and R.G, Burgess (eds.) 'Analysing qualitative data.' 1994. pp.173-194.

In addition to categorising the units of analysis, the theory also aided the analysis *per se*. The next section describes the theories and frameworks used for this purpose.

Use of theory to analyse findings

To analyse the accounts of the documents and elite interview transcripts to answer the research questions, the following theoretical approaches were used: the policy network approach (PNA), the multiple stream theory (MST) and framing theory (FT). These approaches and the rationale for their use in this study are described in brief below.

Policy network approach

The Policy Network Approach (PNA) became popular in the mid-70s; it was developed based on social sciences' social network analysis (SNA) (Parsons, 2005, p. 185). SNA focuses on patterns of relationships between actors and examines the availability of resources and the exchange of resources between actors (Wasserman & Faust, 2003; Wellman & Berkowitz, 1988). PNA applies the same principles but focuses on the links and interdependence of government and social actors with the aim of understanding the policy-making process and its outcomes (Rhodes, 2008; Rhodes & Marsh, 1992). Networks of all types consist of a set of nodes (actors) linked by some form of relationship (or ties), and delineated by some specific criteria (Diani, 2003). This work uses Rhodes' definition for 'policy network' as 'a set of formal and informal linkages between government and between other actors structured around shared beliefs, interests and resources for policy making' (Rhodes, 2008, p. 425).

The PNA can either be considered to describe the structure of the relationships in which a policy takes place (normally also mapped through quantitative methods) and/or give a connotation of agency in the policy process in terms of how these relationships behave and evolve throughout the policy process as a form of governance (Tantivess & Walt, 2008). For instance, PNA helps to identify clusters of complex organisations and the deep structure that either shares or exchanges resources, frames issues, and considers biases of the different interests groups in the process (Parsons, 2005, p. 484). Resources may be finance, knowledge, expertise, technologies, or the capacity to mobilize any of these as well as support from members of the network and from those outside it. By understanding resource exchange in the network, influence over policy outcomes can be understood (Rhodes, 1996), including conflicting interests throughout the process, which some authors have particularly flagged for the case of food politics (Mialon, Swinburn, Allender, & Sacks, 2016; Mialon, Swinburn, & Sacks, 2015; Newton, Lloyd-Williams, Bromley, & Capewell, 2016; Swinburn et al., 2015).

This analysis integrates both structure and agency for PNA (Marsh & Smith, 2000; Swinburn et al., 2015). The focus of this analysis is presented in Chapter 5, and

Chapters 6 and 7 show some dynamics of such networks while describing the actions taken by different actors in the policy process. For this case study, some elements of governance (as defined in table 3.2) in relation to power/influence (as defined in table 3.2) and the cooperation of non-state actors during the policy process are considered for the analysis, including three principles of governance: responsiveness, participation, and accountability taken from a broader analytical framework for assessing health system governance (Siddiqi, 2009). Responsiveness refers to the policy response to population health needs, participation refers to how the actors take part in decision-making process and how they voice their views, and accountability refers to how actors involved in policy making (government officials, academics, private sector and civil society) are liable to the public. These principles are in some sense a combination of the results of power or how power/influence is exercised during the policy process.

Also, this analysis uses the PNA typologies described by several authors to explain their findings. These categories depend on the degree of integration, membership size, and distribution of resources (Rhodes, 2008; Rhodes & Bevir, 2003). Policy communities, for example, refer to networks defining the context of policy-making in specific policies where boundaries are clearly defined. In contrast, issue networks are less tight networks with a large number of stakeholders, including academics, interest groups, and experts. The latter changes constantly, and interdependence is always asymmetric (Adam & Kriesi, 2007). These differences between typologies/categories of networks also depend of the closeness between actors, degree of cooperation, resources exchange, and lack or existence of confrontation. The characteristics observed through the analysis are pointed out in the corresponding chapters.

PNA is more 'an analytical toolbox rather than a theory' (Adam & Kriesi, 2007, p. 146), and it has been criticized owing to its limited theoretical basis, although it has been incorporated into other frameworks (Dowding, 1995; Peters & Pierre, 1998; Thatcher, 1998) as part of the analysis. PNA has been applied in this case, as this approach complements the MST. It helps to explain the relationships and coalitions built during this particular policy process. After considering PNA for this thesis (at the beginning of the PhD in 2013), literature on this approach was published

(Sabatier & Weible, 2014). This approach has also been used recently in the area of food policy (Handforth, Hennink, & Schwartz, 2013; Wood, 2016) and tobacco policy (Weishaar, Amos, & Collin, 2015).

Multiple stream theory

Kingdon's Multiple Streams Theory (MST) mainly focuses on agenda setting. It is inspired by organisational theory (Stages-Heuristic) and yields insights into the dynamics of the entire policy process (agenda setting, decision-making, and implementation) (Buse, 2008; G. Walt et al., 2008). It assumes three streams flowing in the policy system: problem, policies, and politics. At critical points in time, called 'windows', streams are coupled by actors (policy entrepreneurs). The unit of analysis is the entire system or a separate decision. For this case, MST helps explain the three streams that clash and how this 'window' opened for the soda tax to become effective. It also explains the problem, politics, and policy flowing independently. Though the problems and the policy are also analysed through the accounts of actors by using framing theory too.

The empirical findings of this thesis relate to the MST, which also deals with the condition of ambiguity. Ambiguity is a state of having many ways of thinking about the same circumstances or phenomena, and it refers to ambivalence rather than uncertainty. This theory refers to choice as a garbage can into which participants dump unrelated problems and solutions. No one controls the process, while fluctuating opportunities interact. The point is to stress the dynamic, complex, and chaotic nature of political life.

One of the main concerns when considering this approach is that it has been criticized for not explicitly including the role of institutions and individuals in policy-making. Kingdon stated that though the emphasis is not made, the institutions under the politics stream are present and that the institutions are present specifically for access and decisions when referencing the garbage can model. In addition, he points to the importance of policy entrepreneurs and human cognition (Zahariadis, 2014). Nevertheless, a clear advantage is to supply analytical tools to explore how and under what conditions entrepreneurs manipulate the policy process and not only pursue their own self-interest but also provide meaning to

policy makers with problematic preferences. This approach has largely been used in recent years for health policy analysis in a number of fields (Gilson & Raphaely, 2008; G. Walt et al., 2008). In nutrition policy the use of policy theories to aid analysis has increased in recent years (Cullerton, Donnet, Lee, & Gallegos, 2016b). The MST has been applied for analysing public health nutrition policies in Australia and New Zealand including food labelling food, school food programs (Cullerton, Donnet, Lee, & Gallegos, 2016a; Swinburn & Wood, 2013). It has also been used in low- and middle-income countries, including the study of school food policies in the Philippines (Reeve et al., 2018), and in Brazil for a broad range of policies related to obesity (Gómez, 2015). In Europe the MST has been used to analyse physical activity promotion (Rütten et al., 2012), in England for policies aimed to promote walking (Milton & Grix, 2015), and in the US for childhood obesity policies in Arkansas (Craig, Felix, Walker, & Phillips, 2010). Therefore, it is considered a suitable theoretical approach to apply in this thesis as it has been useful in similar work (Clarke, Swinburn, & Sacks, 2016; Gilson & Raphaely, 2008; G. Walt et al., 2008).

Framing theory

Framing theory presents a set of concepts which can be employed to understand how meaning is created inter-subjectively within social world. Framing is a post-positivist theory that uses interpretive and critical approaches to analyse policymaking as a contested meaning-making enterprise (Fischer, 2003).

A frame, as described by Koon (2016), 'is a label used to describe ideas, packaged as values, social problems, metaphors or arguments'. 'Frames' are an important unit of analysis in idea-based policy research as they constitute either a package of ideas or a central organizing idea (Gamson & Modigliani, 1989). Frames have been used to organize meaning and concepts in a wide variety of settings; and have various levels of abstraction, ranging from general ideological orientations to the framing of specific policy problems and policy debates (Koon et al., 2016). Frames, in this context, are heuristic devices which shape our understanding and evaluation of the world around us based upon the extent to which they are cognitively available, accessible, applicable, and appropriate (Druckman & Bolsen, 2011).

Framing is sometimes overlooked in policy analysis, but framing theory and the examination of framing conflicts – when different policy actors seek to set the terms of a policy debate – is vital to understanding policy controversies (Hawkins & Holden, 2013a). Framing theory has been used most extensively by scholars focusing on the importance of ideas in explaining policy dynamics (John, 2013b). Ideas are causal beliefs that shape our understanding of policy problems and help to make sense of political debate (Hay, 2011). They also help in handling abstract concepts such as power as reflected in the data.

Additionally, frames highlight certain aspects of a problematic situation while obscuring others to define problems, diagnose causes, make moral judgments, and suggest remedies (Scheufele, 2004). This is intended for this thesis, owing to the importance of normative perceptions in policy-making. Frames can be either emphasis frames or equivalency frames. The former type of frame assigns weights in the preference formulation of an issue, such as the different possible ways to attend a problem (e.g. obesity or diabetes) (Scheufele & Iyengar, 2012). The latter represent value-based evaluations within a single set of dimensions, thereby causing a frame to be portrayed either negatively or positively, as is the case with perceptions about the negative or positive views on food industry actors participation on the policy design (Scheufele & Iyengar, 2012).

In this thesis, framing theory is used to describe how actors involved in the policy process sought to shape perceptions and understandings of (or frame) the policy problem and the solution to that problem. In addition they sought to shape perceptions of themselves and other policy actors in order to influence the resulting policy process on the soda tax. This policy analysis, focuses on the struggle of competing values and beliefs (ideas) in relation to the definition of the policy problem and the proposed solutions.

Alternative theoretical frameworks

Other theoretical frameworks were considered in this thesis including the advocacy coalition framework (ACF). The main focus of the ACF is on how organisations, institutions and actors act according to the policy subsystem. It maps the beliefs of policy elites and the conditions under which coalitions occur. In addition, it explains

the changes under a political system and institutional arrangements (Jenkins-Smith & Sabatier, 2013). This was considered but has not been used because it has an economical approach and divides the political arena into systems and subsystems. The theory requires an observation of the case for long periods of time as the framework has a very complex analytical structure. In this thesis, time and resources restrict the application of the ACF, although it has acquired popularity among health researchers outside USA, as when it was first developed (Jenkins-Smith & Sabatier, 2013).

III. Methodological approach

A policy analysis of the introduction of the Mexican soda tax policy was conducted using a qualitative case study methodology (Yin, 2013). There have been numerous definitions of the case study approach (Simons, 2009; Thomas, 2011). All such definitions share three concepts: (a) case studies look at the complexities of real situations in real time, such as a project, a policy, an institution, a program, or a system (Simons, 2009; Stake, 2005); (b) they set up boundaries around the place and time and define the case (Ragin & Becker, 1992); and (c) they apply multiple sources of data to explore the case (Yin, 2013).

Study design and methods

First, a scoping review was performed to review existing literature on health-related fiscal policies, and current obesity prevention policies and recommendations. This scoping review fed into the background of the research and helped to formulate the research questions and define the study design and methods.

The main research question is an explanatory rather than a descriptive one. The study design uses qualitative elite interviews and documentary analysis as data collection methods. Elite interviews were conducted, as they provide accounts and views of actors who were involved in the policy process or who have had a direct benefit or loss as a result of the policy measures (Hochschild, 2009). Elite, in this case, refers to persons who are chosen by name or position for a particular reason (Hochschild, 2009), rather than people selected randomly or anonymously. A purposive sample was used to include informants considered to be elite because of their involvement in the specific case study, as described below.

Documentary analysis was also used. In this method, written data which is already available is analysed. Documents are defined for qualitative research as the 'whole range of written sources that might be available relating to a topic', and they provide a vast source of information on developments about the phenomenon studied (Bailey, 1994). Documents included in this analysis are both published and unpublished documents (grey literature) that were freely available, such as

speeches, manifestos, corporate reports, laws and regulations, and press releases or public statements concerning the soda tax (Mogalakwe, 2006).

The use of multiple methods helped to triangulate data and improve the validity of the thesis (Green & Thorogood, 2012a; Milo, 1990; Pope & Mays, 2009). The views, positions, and relationships between different actors as well as the similarities and discrepancies of the actions, beliefs, and positions regarding the soda tax could be better understood by using both data collection methods. Elite interviews and a document analysis were appropriate methods for a study on recent historical changes and for identifying the role of stakeholders (actors) in political processes (Hochschild, 2009).

Other methods such as focus groups, media analysis, and ethnography were considered but ultimately excluded. Focus groups and ethnography were excluded as this research does not focus on analysing group views or the perceptions of an intervention, nor is it the main aim to provide a theory grounded on obtained data. Instead, the present study aims to understand a phenomenon and provide insights based on theories to provide evidence for policy recommendations. Furthermore, constraints of time and budget played a role in the decision to exclude media analysis for this thesis.

Table 3.4 summarises the research questions, aim and objectives of the research, and main methods used to address them as well as the theories considered to construct the research questions. The first three research questions were mainly answered through interviews with stakeholders and the next three, through documentary analysis. However, the two methods complement each other, and some core information obtained from each method was triangulated to fill gaps in information when needed.

Table 3.4 Research questions, objectives, research methods, and theory used for the analysis

	Research question	Objective	Methods	Theory for analysis
1	What contextual factors facilitated and constrained this process in Mexico?	To understand the contextual factors that facilitated and constrained the development of the soda tax policy	Semi-structured interviews	Policy triangle (context), Framing (how people think about the issue as part of the context)
2	What was the process through which the soda tax became a policy option and part of the obesity strategy?	To analyse the policy-making process surrounding the soda tax as part of the national strategy on obesity	Semi-structured interviews Documentary analysis	Policy triangle (process), Multiple streams (policy, politics, and problem)
3	What were the positions and influence of key stakeholders toward the soda tax policy?	To map and explore stakeholders' positions and influence on the soda tax	Semi-structured interviews Documentary analysis	Network analysis, Multiple streams (politics),
4	What were the role of actors in shaping the design and implementation of the soda tax policy?	To examine how actors attempted to influence the design and implementation of the soda tax and the immediate results of the soda tax policy	Documentary analysis Semi-structured interviews	Network analysis, Framing theory, Multiple streams (politics)

IV. Data collection

Elite interviews

Elite interviews refer to interviews conducted with a selected group of actors who have particular power and influence on the research topic (Hochschild, 2009). The process of designing the interview guides, identification and selection of participants, and how the interviews were conducted is described below.

To perform the elite interviews, a topic guide for the semi-structured interviews was designed by the researcher. A semi-structured interview is guided by a pre-defined list of questions or topics related to the aims and objectives (Minichiello, Aroni, Timewell, & Alexander, 1990). Ritchie and Spencer's (1994) framework was used to guide its design to avoid covering broader topics during the interview. This framework includes the different areas policy analysis covers: contextual, diagnostic, evaluative, and strategic factors. The topic guide included questions about stakeholders, knowledge of the policy problem, agenda setting, resulting policy content, their involvement in the whole process, and their views on the future of the current regulatory framework of the soda tax. Annex 1 shows the topic guide. It was initially piloted with two interviewees and revised before it was used with the other participants and respondents.

Identification of key participants and sampling

A purposive sample of stakeholders was determined a priori as this sample strategy is useful when only a limited number of people can serve as the primary data source, such as in the elite interviews conducted for this research (Box-Steffensmeier, Brady, & Collier, 2008; Dexter, 2006). The sample frame was decided following consideration of the literature review, personal knowledge of the specific Mexican policy context and applying a stakeholder mapping to identify the characteristics and variations of the selected participants in order to reduce bias in the researcher's judgement (Guest, Bunce, & Johnson, 2006). First, a list of potential participants was obtained to identify stakeholders across key disciplines and sectors involved in the soda tax policy by using the guide in Table 3.5. After conducting the first set of interviews, a snowballing technique was applied to include more actors (Morse, 1995).

Table 3.5 Groups of stakeholder considered for purposive elite interview sample selection

Private sector stakeholders	Public sector stakeholders	Civil society stakeholders
Corporations and businesses	Ministries and advisors	Media
Business associations	Civil servants	Universities
Professional bodies	Elected representatives	Social movements & advocacy groups
Individual business leaders	Political parties	Trade unions
Financial institutions	Commissions	National NGOs
	International bodies	International NGOs

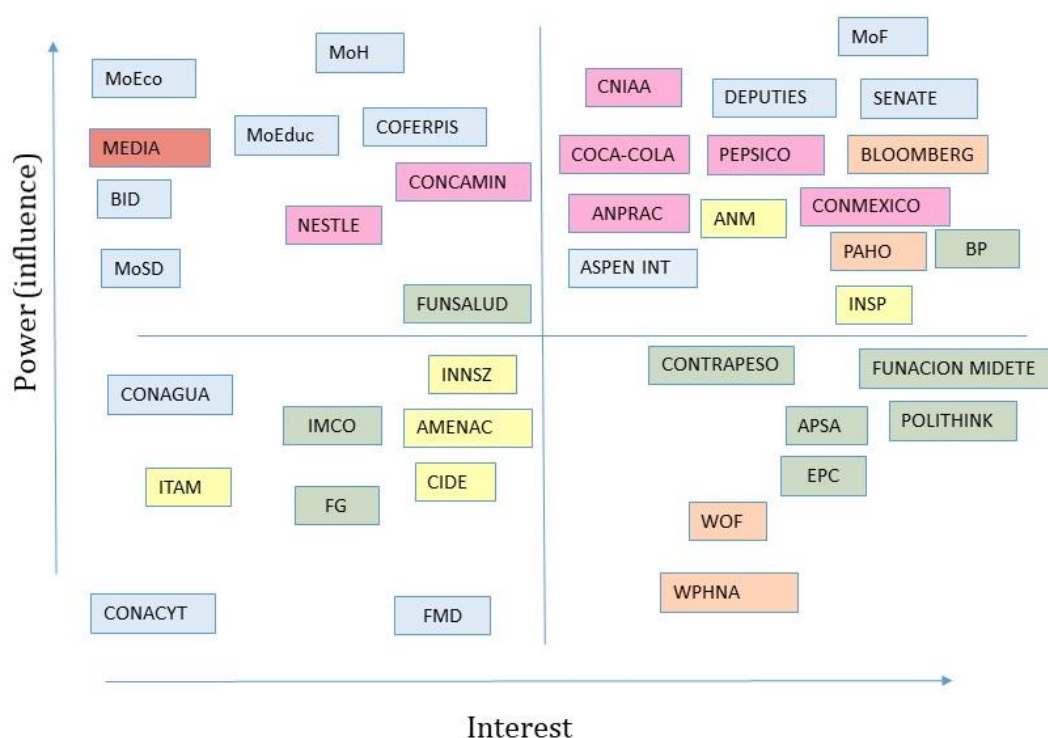
Adapted from: Start, D. & Hovland, I. (2004). *Tools for policy impact: a handbook for researchers*: Overseas Development Institute London.

Stakeholder mapping

The stakeholders (actors) were mapped using a stakeholder grid that was used as part of a comprehensive stakeholder analysis based on the ODI guidelines (Start, 2004). Stakeholder analysis is a technique used in applied policy research, and it can provide new knowledge about policy-making (Varvazovsky & Burugha, 2000). Specifically, it can be used to map the position of the actors in relation to an issue as well as among each other. This mapping is used to identify all actors according to their power-interest at the time (2013). In this case, power measures the influence they have over the policy and the degree of their ability to block or change the policy. Interest is the degree to which they are likely to be affected by the policy change (Start, 2004). As mentioned above, these criteria were set following pre-conceived assumptions as a previous participant in the process and based on a literature review.

Stakeholder mapping was used to identify whether any part of the grid was blank to consider any gaps in the sample frame. This allowed the sample frame to have a weighted design according to the stakeholder's power-interest, thereby allowing the sample to be as inclusive as possible. Figure 3.1 shows the list of stakeholders identified and allocated in the grid.

Figure 3.1 Stakeholders mapping by organisation



Key: Please refer to Acronyms index p. 4-7

Recruitment of participants

Between September and December 2014, 43 individuals were invited to participate in this study and, of these, 33 were interviewed. First, an invitation was sent by email to explain the purpose of the interviews and the research conducted as part of a thesis to obtain a PhD at LSHTM. The stakeholders were also contacted by phone at least two more times after the e-mail was sent whenever there was a non-response after a week of the first invitation, which was sent by e-mail.

All except two consented to have the interview recorded. Of the ten individuals who declined to participate; two (one a journalist and one an academic) were unable to attend the interview, and eight (one from the civil society, one academic, and six from the food and beverage industry (F&BI)) declined to participate with no given reason. Table 3.6 shows the number of people recruited by type of organisation.

Table 3.6 Stakeholders invited to participate in this study

Type of organisation	Number of participants			
	Interviewed	Declined participation	Unable to reschedule	Invited
Food & Beverage Industry and Industry Consortiums	5	6		11
Academics	7	1	1	9
Governments				
Executive power	7*			7
Legislators	3			3
Civil society	4	1		5
International organisations	2			2
Media	3		1	4
Think tanks	2			2
TOTAL	33	8	2	43
*Two members of the federal government did not allow recording during the interview				

Conducting interviews

All participants were provided with a copy of the participant information sheet on the day of the interview. After being given time to read it and ask questions, they were asked to sign the informed consent sheet approved by the Ethics Committee of LSHTM on the 29 August 2014 (Reference number 8573) and by the Ethics and Research Committee of the National Institute of Public Health (in Spanish) on 29 September 2014 (Reference number W-09) (Annex 2).

The interviews lasted between 45 and 60 minutes and were conducted by the researcher at a location selected by the participants. The interview followed the semi-structured topic guide, which had been designed and piloted. Data collection from the interviews was iterative, as the ideas raised and opinions generated provided questions for subsequent interviews. Care was taken to protect participants' confidentiality. Triangulation of data was employed to identify common and diverging narratives between informants in each sector, and within the responses of each informant regardless of the sector they represented (Flick, 2004).

Most interviews were recorded digitally and downloaded onto a personal computer. During the interview, handwritten notes were taken, and these were typed after the interviews. The audio recordings were transcribed by the researcher and by an

assistant assigned to the National Institute of Public Health (INSP) project, as explained in the Ethics section.

Data protection and security

Interviews transcriptions were stored in a Dropbox password-secured folder. All interview files were anonymized using an alpha-numeric code. The audio recordings were only accessible by the PhD candidate and a study assistant based in the INSP who helped transcribe 20 interviews. The transcripts and hard copies of signed informed consent forms were stored securely in a locked drawer at the candidate's LSHTM desk while in London and in the candidate's home while in Mexico. Information storage satisfied security and ethics requirements during the study and followed the standard LSHTM ethics and good data management practices.

Documentary analysis

Documentary analysis was used as a complementary data collection method alongside the elite interviews, for the purpose of triangulation of information from different sources (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014; Flick, 2004). It is useful for policy analysis of the Mexican soda tax, as it considers organisation reports, policy documents, and other materials generated during policy design and implementation that are relevant to answering the research questions of this thesis.

The time frame for documentary review was defined *a priori* as five years, from January 2011 to December 2015. This includes the first attempts by legislators to include an obesity policy on the government's agenda and the fiscal reform in 2013, when the soda tax became effective. The two years following the fiscal reform are also included in the analysis to document the main reactions and positions following the policy change.

Document selection

To perform the documentary analysis, first, the documents were classified to define the inclusion and exclusion criteria for the sampling of documents to be selected.

There were three types of documents: primary documents, secondary documents, and auxiliary documents (Bailey, 1994; Mogalakwe, 2006).

Primary documents are written by someone who experiences the event, and they include published and unpublished data. For this thesis, primary data included published interviews, organisational web pages, minutes of meetings, conference transcripts, academic forums, articles and reports published on the topic by individuals or their organisations, as well as documents related to, referenced in, or provided during the interviews.

Secondary documents are records about primary documents as well as other objects or accounts that are at least one step removed from the initial data sourced. They interpret, assign value to, and draw conclusions about the events reported in the primary data (Altheide & Schnieder, 2013). For this thesis, secondary data included newspaper articles or other mass media publications referring to the soda tax that provide any record of primary documents.

Auxiliary documents supplement a research project but are not the main focus of the investigation nor the primary source of data for understanding the topic. Owing to time limitations and the scope of this research, no auxiliary data was included in this study.

Document search

After defining the type of documents to be included, documents were selected through a methodical search process. The search began with a review of the websites of organisations identified in the stakeholder mapping, and the attempt to include all actors known to be directly or indirectly involved in the policy process. For example, people from CONMEXICO and ANPRAC did not consent to the interview, but they are examples of core actors involved in the process, and their website and public documents were included in the analysis. All websites, which were searched systematically, are listed in Table 3.7.

Table 3.7 Websites searched methodically by type and name of organisation

Type of organisation	Name of organisation
International organisations	<p>PAHO (Pan-American Health Organization)</p> <p>Bloomberg Philanthropies (BP)</p> <p>World Obesity Federation (WOF)</p> <p>Interamerican Development Bank (IDB)</p> <p>World Public Health Nutrition Association (WPHNA)</p> <p>Center for Science in the Public Interest (CSPI)</p>
Government	<p>Ministry of Health (MOH) (Secretaría de Salud- SSA)</p> <p>Ministry of Finance (MoF) (Secretaría de Hacienda y Crédito Público - SHCP)</p> <p>Ministry of Education (MoE) (Secretaría de Educación Pública - SEP)</p> <p>Ministry of Social Development (MoSD) (Secretaria de Desarrollo Social- SEDESOL)</p> <p>Federal Commission to Protect Against Sanitary Risks (Comisión para la Protección Contra Riesgos Sanitarios - COFEPRIS,)</p> <p>National Water Commission (Comisión Nacional de Agua - CONAGUA)</p> <p>SENATORS official website</p> <p>DEPUTIES official website</p>
Think tanks/ civil society organisations	<p>National Association of Diabetes (Asociación Mexicana de Diabetes - AMD)</p> <p>Mexican Diabetes Federation, (Federación Mexicana de Diabetes - FMD)</p> <p>Mexican Foundation for Health (Fundación Mexicana para la Salud - FUNSALUD)</p> <p>Contrapeso</p> <p>Mídete Foundation (Fundación Mídet - FM)</p> <p>Consumers' Power (El Poder del Consumidor - EPC)</p> <p>Alliance for Healthy Eating (Alianza por la Salud Alimentaria - ASA)</p> <p>Aspen Institute (AI)</p> <p>Mexican Institute for Competitively Instituto Mexicano para la Competitividad - IMCO)</p> <p>Polithink</p> <p>Mexican Association of Nutritionists (Asociación Mexicana de Nutriólogos - AMENAC)</p>
Industry	<p>National Association of Soda and Carbonate Water Producers (Asociación Nacional de Productores de Refresco y Agua Carbonatada - ANPRAC)</p> <p>Mexican Board of the Consumption Industry (Consejo Mexicano de la Industria de Consumo A.C - CONMEXICO)</p> <p>Confederation of the Industry Chambers (Confederación de cámara de industriales - CONCAMIN)</p> <p>National Union of Sugar Cane Producers (Unión Nacional de Caneros- UNC)</p> <p>Coca-Cola's Economic Mexican Promoter (Fomento Económico Mexicano, Coca-Cola FEMSA)</p> <p>ARCA (Coca-Cola's Mexican and Latin-American distributor)</p> <p>PepsiCo</p> <p>Pepsico Foundation (PF)</p> <p>Cocal-Cola Foundation (CCF)</p> <p>National Chamber of Sugary and Alcohol Industry (Camara Nacional de la Industria Azucarera y Alcoholera - CNIAA)</p> <p>Euromonitor</p>

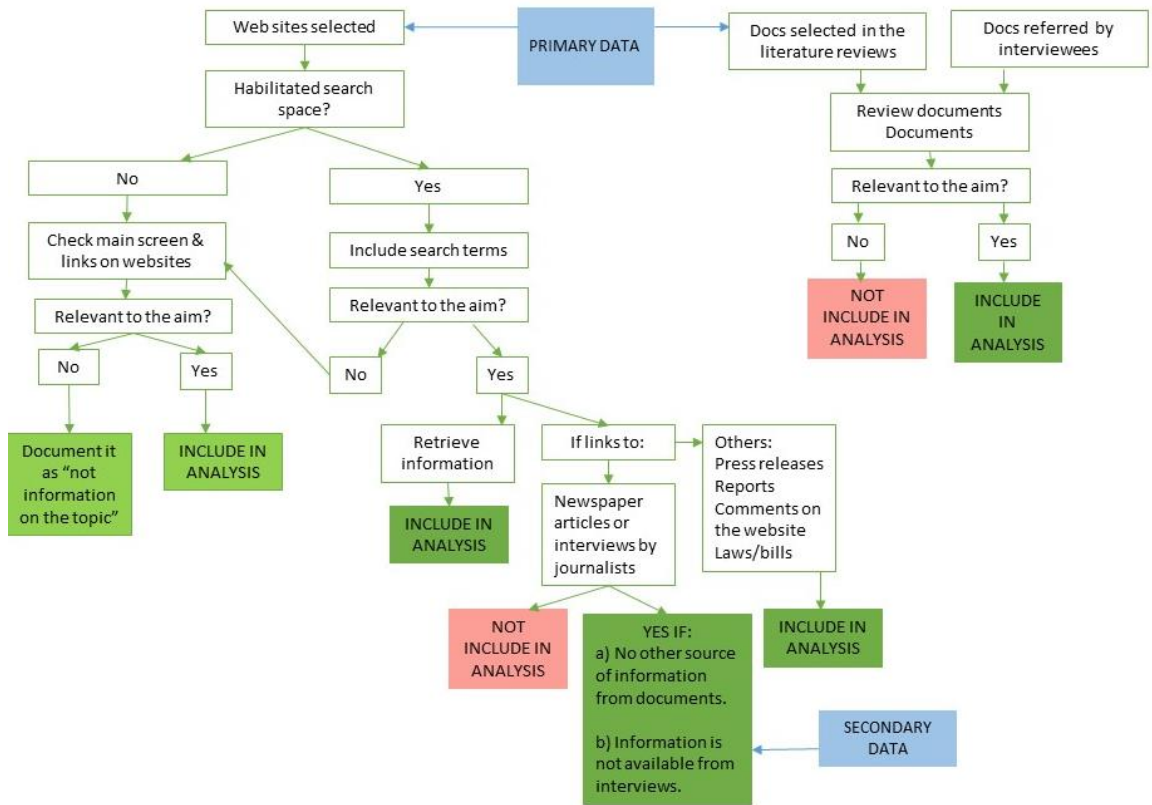
Table 3.8 summarizes the search terms used for each website. These terms were applied as independent searches (one search per term) and/or were combined.

Table 3.8 Search terms used on each website in Spanish and English (depending on the site)

Search term 1	Search term 2	Dates	Actions	Attributes	Arguments
Spanish					
Impuesto IEPS	Refresco Bebidas	2011-2015	Estrategia policita	Efectivo	Empleo
Gravamen	azucaradas		Legislación	Inefectivo	Salud
Reforma fiscal	Agua potable		Reforma	Regresivo	Inequidad
	Agua embotellada			Elástico/inelástico	Gasto
				Beneficios/implicaciones	Obesidad
					Diabetes
English					
Tax Levy	Sodas	2011-2015	Strategy	Effective/ineffective	Employment
Fiscal	Sweetened beverages		Policy	Regressive	Health
Reform	Drinking water		Legislation	Elastic/inelastic	Inequality
	Bottled water		Reform	Benefits/implications	Expense
					Obesity
					Diabetes

Some exceptions were made depending on the structure of each web site. Examples include (a) when a webpage lacked a search function, (b) when searched key terms and links ended in a journalistic note or interview, (c) when the link to a specific document was followed and the document was missing, and (d) when the webpage considered was no longer available or did not mention the topic whatsoever although it was known a priori that the institution was involved in the policy process. For this last scenario, where websites such as FUNSALUD or SSA had no public or internal documents available, secondary data were used by performing Google searches with the terms listed in Table 3. Secondary sources were cross-checked with accounts from the same institution's interviewees (if performed) and with other documents that refer to the stakeholder's position, but which were not necessarily accessed through the defined search. Figure 3.2 shows a flowchart of the process used to select the documents which were finally included.

Figure 3.2 Documents selection for analysis



Additional material obtained from interviewees

During the interviews, several actors referred to documents relevant to the soda tax. Such documents were either bills proposed by actors interviewed, reports edited by their organisations, presentations, or press releases. The documents were read and discussed with supervisors to decide whether they should be included.

Limitations of document selection

One of the main limitations of the approach used to select documents is the date of the review (January and February 2016), as some of the information on the websites might have already been removed or modified. To overcome this limitation, whenever information gaps relevant to addressing the research question were identified, two approaches were considered. First, interview transcripts were reviewed and if relevant, data was included, as the analytical framework used is the same. Second, if the first approach was not useful owing to information gaps in documents or interview transcripts, additional secondary data was included when possible to draw conclusions. The results section of this thesis mentions whenever any of these approaches was used, and it is discussed accordingly in the

corresponding section. When relevant documents considered to be relevant for this investigation were not found through the standardized search, the processes mentioned above were also used. If, by using any of those processes the source document was still not found, it was accepted as a 'lost' document. The implications of not being available are discussed in the results and discussion chapters. This situation was considered as a finding of the policy process. In total, 145 documents were found and included in the sample. Table 3.9 lists the type of document and year of publication.

Table 3.9 Number of documents analysed by type and by year of publication

Type of document	Period					Total
	2011	2012	2013	2014	2015	
Policy documents	0	2	2	4	1	9
Corporative documents	2	4	4	4	1	15
Press releases	2	3	3	3		11
Posts on websites	2	12	19	18	36	87
Organisations' reports		1	3	2	5	11
Financial reports (papers)		1	1	1	2	5
Newspaper articles (secondary documents)				1	4	5
Minutes/programs of meetings		1	1			2
Total	6	24	33	33	49	145

V. Data analysis

All data including interview transcripts and selected documents were uploaded to and coded using NVivo software (versions 10 and 11, QRS International), which was used for categorizing and organising the data.

A qualitative thematic analysis was conducted. Interviews and documents were analysed at different points in time during the research process using the same analytical approach. An abductive approach was selected to explore all aspects of the dataset and to interpret the data in two steps (Green & Thorogood, 2012b; Meyer & Lunnay, 2013). First, key themes were applied as a guide to address the overall

research aim. These themes included the following topics: knowledge of policy, participation, influence, self-perceived power, main perceptions of 'the problem' and 'the policy', and implementation process of the soda tax. As mentioned above, the use of theory also directed the interview guide, and therefore the analytical methods used, as both the interviews and the documents have similar theoretical approaches.

To understand the types, characteristics, and organisational aspects of the documents and what they claim to represent, the themes and codes in each document were identified using the *a priori* defined themes, without forcing them to fit. The initial coding was reviewed with the two PhD supervisors.

Second, emerging codes and themes from documents were integrated into the analytical framework. To account for reflexivity, the next step was to refer to the themes emerging from the first stem (from theory) and then to compare them and discuss the differences and loopholes identified in each theme during the meetings with supervisors. The themes were reviewed and agreed to (a) review the balance between the two orientations, (b) reflect on the complexity of the case by exploring the associations and explanations of the policy, and (c) meet the epistemological foundation of the analysis.

This methodology helped to identify the main aspects of the soda tax (context, content, and policy documents of the process), to map how the positions of actors evolved and to identify how they framed their arguments and positions over the years selected. In addition, this methodology allowed for the triangulation of data from different sources (documents and accounts of interviews made in 2014) and for triangulation of theoretical perspectives (defined here as 'approaching data with various theoretical pints in mind') (Flick, 2004, p. 178).

To undertake triangulation of data, a spreadsheet was built with arguments found in the analysis, and helped to compare and contrast arguments between interviewees' transcripts. This spreadsheet was later use to look into the *a priori* defined themes, and to identify emerging themes. To triangulate across methods, once information of the interviews was analysed, documents were analysed using

the same approach. Similar themes were identified, and new ones emerge. Finally, arguments identified in different data sources were compared and contrasted.

Applying triangulation helped to obtain richer enough evidence to show the complexities, problems, and strengths of the data analysis, and to provide a plausible interpretation of the data.

VI. Ethics

Ethics approval was obtained from the LSHTM Observational Research Ethics Committee on 31 July and 24 August 2013 under the 'title 'Food politics in Mexico: A policy analysis of the 2014 soda tax', reference number 8573. The ethics submission included the semi-structured interview guide, informed consent form, and participant information sheet (Annex 3). The Mexican National Institute of Public Health's Ethics Committee approved the interview guideline in Spanish and the participant information sheet on 24 September 2014. Both included information on the research topic and the food labelling policy. The latter topic had originally been considered for thesis inclusion but was later excluded from the thesis. The Ethics Committees' of both institutions required the project to include the ethical principles stated in the Declaration of Helsinki developed by the World Medical Association (confidentiality of data, anonymity, accepting to participate, right to withdraw from the study, and permission to record the interview).

There were some concerns regarding whether to classify data obtained through Internet searches as public or private (Buchanan & Zimmer, 2015; Heilferty, 2011; Seale, 2005). Although postings on websites or microblogs are technically in the public domain, the authors probably do not expect this information to be used as research data. For this thesis, online narratives are considered 'representation approaches' rather than accounts of research subjects. This is one of several ways to approach ethics when dealing with online publications (Heilferty, 2011; Seale, 2005). Moreover, a compilation of ethical perspectives and the dilemmas emerging in research have been published, and these are constantly under revision as new techniques and dilemmas emerge (Buchanan & Zimmer, 2015). Therefore, when

researching online documents, periodical reviews on ethical guidelines were reviewed and considered.

VII. Reflexivity and personal experience

It is important to acknowledge that as former advocate, I hold opinions on the benefits of soda tax. Awareness of where I come from and the opinions I hold were accounted for during the data collection, analysis and write up. As a researcher my values, education, and nationality, my network with the actors, and the foreign institution I represented during this research, have shaped this study. Recognising all factors associated to my background and experience adds to quality assurance as mentioned in table 3.10. According to H. Becker it is unavoidable to take sides as a researcher, though by disclosing participation and using findings for providing further theoretical perspectives, instead of having a strong position strengthens research (Becker & Faulkner, 2008).

As literature points out, policy analysis is unique in time and place and analyses are inherently subjective. The quality of the analysis depends on the skills, time, resources and knowledge of the researcher about the context (insider) and biases of the analyst (Green & Thorogood, 2012a). All these possible challenges of the policy analysis were recognised, and carefully considered during the research with guidance and support from the supervisors. Advantages and disadvantages faced during the process were accounted for and reflected upon, and are discussed in the final chapter (Chapter 9, p. 203).

VIII. Quality assurance

As this research used a multi-method approach, the issues of reliability and validity were considered. Reliability refers to 'whether the research process is consistent and carried out with careful attention to the rules and conventions of qualitative methodology' (Tolley et al., 2016, p. 25). Validity or credibility refer to 'the confidence in the truth of the findings, including an accurate understanding of the context' (Tolley et al., 2016).

To ensure research transparency and to acknowledge possible flaws during the research process, a list of techniques based on Guest, MacQueen and Namey's list was used (2012, p. 101). This aims to help qualitative researchers identify the strengths and weaknesses of their research when evaluating its validity and reliability (Guest, MacQueen, & Namey, 2011). The adaptation of this list for this thesis is shown in Table 3.10 with the suggested techniques and comments on how they were used for this research.

Table 3.10 Techniques for enhancing validity and reliability, adapted for recommended techniques from (Guest et al., 2011)

Technique	Used	Comments
1. Use of multiple methods	√	Use of interviews and documents
2. Team-based instrument development	√	Although not a team project, the interview guide and research question were reviewed with PhD supervisors
3. Adjust the instrument	√	Interview guides were piloted and adjusted after the first interview
4. Monitor data as they are obtained	√	Review and familiarization with the audio and taking notes during interviews were performed
5. Transcribe data using protocol (verbatim)	√	Transcripts were done verbatim by a trained person
6. Check translation of quotes used and revise by bilingual supervisors	√	One supervisor and a committee member reviewed the quotes
7. Use of multiple coders	×	As this was a PhD, only one person coded the data
8. Codebook and themes (external and peer review of coding and summaries)	√	Codebook was reviewed with supervisors for interview analysis and documentary analysis
9. Create an audit trail	×	
10. Triangulate data sources and identify negative cases	√	Triangulation was made between interviews and documents (data source and multiple methods)
11. Negative case analysis	×	
12. Support themes and interpretations with quotes	√	Results section and analysis contains 'en vivo' quotes

IX. Summary

This chapter presented the study design and methodology used to answer the research questions. The aim was to explain how the qualitative policy analysis of the soda tax was conducted; why these data collection methods were used; the analytical method chosen; and the main considerations including the theoretical background.

This is a policy analysis of a case study using qualitative methods for data collection. Elite interviews and documentary analyses were selected as the most suitable data collection methods as both reflect the policy process through the accounts and written materials of the process, its content, and the participants during the policy change. The interviews had a semi-structured design, and 33 participants, chosen purposively using a stakeholder mapping strategy, were interviewed. In addition, 145 documents were selected following a systematic search strategy. The analysis took an abductive approach using an iterative process. The LSHTM ethics protocol was followed for data collection, and the NVivo data management software was used to organise the data for analysis. For quality assurance and security of data, other researchers (supervisors) were consulted, and they reviewed all materials and outputs during the process.

Chapter 4. Contextual factors relevant to obesity, sugary drinks consumption and policy actions in Mexico

I. Introduction

This chapter presents the context of Mexico at the time the soda tax was proposed. First, it describes the national trends in rates of obesity and trends in selected obesity risk factors including sugar-sweetened beverage (SSB) consumption. Second, it presents the economic importance of SSB and the sugar cane industry in Mexico. It discusses the lack of access to safe drinking water the country is experiencing which has exacerbated the consumption of industrialised beverages. Finally, it presents an overview of the political context when the soda tax was discussed and the motivations behind the policy change.

II. Overweight and obesity trends in the country

In 2006 the National Nutrition and Health Survey (NNHS; *Encuesta Nacional de Nutricion y Salud- ENSANUT 2006*) showed that the prevalence of overweight and obesity in Mexican adults was 69.3% (Olaiz-Fernández G et al., 2006). In 2012, the NNHS showed the combined prevalence of overweight and obesity in adults had increased to 71.2% (38.8% overweight and 32.4% obesity), representing 48.6 million people (Gutiérrez et al., 2012). The prevalence of overweight and obesity for children under 5 increased from 33.6% in 2006 to 34.4% in 2012 (19.8% overweight and 17.4% obesity) (Gutiérrez et al., 2012). These results positioned Mexico as the country with the highest increase in adult obesity worldwide at the time (Popkin et al., 2012). In 2016, a new NNHS showed that the trends continued to increase in adults, as the combined prevalence of overweight and obesity reached 72.5% (39.2% overweight and 33.3% obesity), while the rate for children between 5 and 11 years slightly decreased to 33.7% (15.4% overweight and 18.3% obesity (INSP, 2016).

Other obesity risk factors rates in Mexico

Results of the NNHS conducted in 2016 showed that 79 % and 75.6 % of children (10-15 years) spent more than two hours sedentary in front of a screen, while only 17.2% of them engaged in physical activity at least 60 minutes every day of the week, as recommended (INSP, 2016). Furthermore, 14.4% of adults did not follow the WHO recommendation of spending at least 150 minutes per week exercising, while 50.1% of adults reported to spend more than two hours per day in front of a screen (INSP, 2016).

The same NNHS showed 61.9% of children between 5 and 11 years were consuming sweets and desserts more than three times per week, while 81.5% were consuming SSB three times or more per week. Only 20% reported consuming vegetables on a daily basis. Additionally, 38% of adults reported consuming snacks, sweets and desserts more than three times per week and 85.5% consumed SSB more than three times per week, while only 42.3% reported consuming vegetables daily.

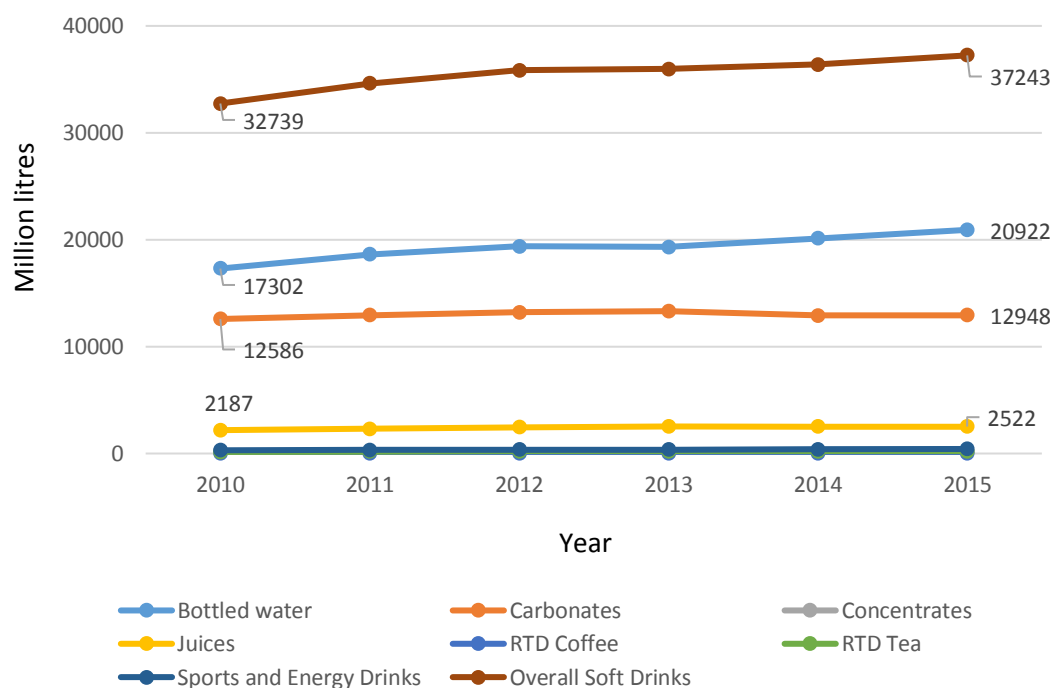
III. Sugar-sweetened beverage consumption and water availability

Several sources have confirmed that Mexico has become the country with the largest SSB and carbonated sweetened beverage (soda) consumption per capita in the world (Barquera, Hernández-Barrera, & Tolentino, 2008; Gutiérrez et al., 2012; Stern et al., 2012). Factors that have led to an increase of soda consumption include the large distribution chains that big soft drink companies have achieved in Mexico in the last decade (Taylor, 2016), and the lack of a safe, public drinking water supply in most urban cities and rural towns (CONAGUA, 2007). To describe the whole phenomenon is beyond the scope of this research, but some of the main issues influencing how sweetened beverage consumption has increased are described in this chapter.

Between 1999 and 2006, the percentage of energy consumed from all beverages was 22.3% for adults and 20.1% for adolescents. For adults, almost 15.2% came from beverages other than milk and juices (Barquera et al., 2008). Additionally, the National Survey of Income and Expenses of Homes (Encuesta Nacional de Ingreso y Gasto de Los Hogares - ENIGH) 2010 data showed that the trend of SSB consumption

in Mexico has increased in terms of both number of consumers and frequency of consumption per week (Colchero et al., 2012). Between 1998 and 2006, the population who reported consuming SSB increased from 48% to 60%, reaching an average consumption of 191 litres per person per year. A recent analysis showed that in 2012 beverages with added sugars represented 17.5% (325 kcal) and 19.0% (382 kcal) of the total daily energy intake per capita in children aged 1-19 years and adults aged ≥ 20 years, respectively. Stern, Tolentino & Barquera (2012) found that the top three most consumed beverages by adults were plain water (74.6%), sugary drinks (42.0%), and sugary coffee/tea (37.6%). Finally, estimations of soda consumption in Mexico have also been based on sales reported in the Euromonitor International database from the Food Industry Development Centre Inc ("Euromonitor ", 2011). The sales of soda are divided into on-trade and off-trade, which represents the main mechanisms of soda sales. Trends in the past five years are summarised in Figure 4.1.

Figure 4.1 Sugar-sweetened beverages off-trade sales in Mexico 2010-2015



Developed by [the author of this thesis](#) with data from Euromonitor International official statistics, trade association, trade press, company research, store checks, trade interview, and trade sources.

The estimated average consumption for 2011 was 163 litres per capita per year, which was 30% higher than the estimated consumption for the US (118 L) (Colcehro, 2013; Colchero et al., 2012). For the following three years sales stayed flat, and just after the soda tax took effect sales slightly decreased, as shown in Figure 4.1.

The SSB industry and the retail market in Mexico

With high consumption of soda, Mexico has been a profitable market for the beverage industry. Two companies have 85% of the market share for soda in Mexico: Coca-Cola (70%) and Pepsi (15%) (Besley & Rosen, 1999; Cahuana et al., 2012; Cahuana, Sosa, Rubalcava, Panopoulou, & Rodriguez, 2013). A relatively old source from the National Association of Producers of Soda and Carbonated Water (Asociación Nacional de Productores de Refrescos y Aguas Carbonatadas-ANPRAC)(ANPRAC, 2008) estimated the annual consumption of soda was 160 litres per capita per year in 2008, representing a 6% increase since 2000. Also, the ANPRAC report for 2008 (later removed from their site) estimated annual soda sales were around 16,916,000 litres and 95% of the soda portfolio was sugar-sweetened beverages, and only 5% were non-caloric sweeteners (ANPRAC, 2008). ANPRAC stopped presenting reports on their website after other sources of research revealed the implications of high soda consumption. Any detailed report after 2008 was removed from their site and stopped being available in any open information source.

Production of soda by the company with the largest market share in Mexico, The Coca-Cola Company, is via two bottling companies: Coca-Cola FEMSA and Arca-Continental. Coca-Cola FEMSA is the largest with sales of 2,685 million unit cases in 2011. Each unit case equals 5.678 litres of soda, hence sales equalled 1,521,704 litres of soda. Their market share was 73.7% in carbonated sodas, 4.9% in water, 16.3% in flavoured water and 5% in potable bottled water(Coca-Cola FEMSA, 2011). Coca-Cola FEMSA sales in Mexico represented 44% of their total sales in Latin America, with 23% of total sales in Colombia, 12% in Venezuela and 11% in Brazil (Coca-Cola FEMSA, 2011). In 2012, sales increased to 2,649 million unit cases, and by 2013, their annual sales grew by 5.2%, with sales of 3,205 million units, or 18,197,990 litres of soda (Coca-Cola FEMSA, 2012). For 2014, when the soda tax was implemented, the sales for that year were 3,417 million unit cases, with an

annual growth of 6.6% (Coca-Cola FEMSA, 2014). The overall estimated consumption per capita decreased mainly after the soda tax was implemented, though information on the type of beverages sold was not available in the latest annual report (Coca-Cola FEMSA, 2015a). Table 4.1 illustrates Coca-Cola FEMSA's sales for 2011 to 2015 per capita, grouped by type of beverages sold.

Table 4.1 Coca-Cola FEMSA estimated beverage sales per capita per year and by type of beverage produced

	2011		2012		2013		2014		2015	
	L/capita	(%)	L/capita	(%)	L/capita	(%)	L/capita	(%)	L/capita	(%)
Consumption of beverages per capita [£]	144	100	148	100	149	100	138	100	135	100
Carbonated soda	105	73	108	72	108	72	101	72	NA	NA
Flavoured bottled water	7	5	7	5	8	6	8	5.8	NA	NA
Still water, presentations <5L	7	5	8	5	8	6	7	5.1	NA	NA
Sold in jug presentation (>5L) Still and flavoured water	24	17	26	18	25	17	23	17	NA	NA
Sweetened beverages (approximately 66.5%)*	95		97		98		91		89	
* Estimated from Coca-Cola FEMSA annual report information (Coca-Cola FEMSA, 2011, 2012, 2013, 2014, 2015a).										
[£] population estimated in 2011: 116,147 000 and soda consumption (Colcehro, 2013)										

The high consumption and availability of sodas and sugary drinks are influenced by other contextual factors of relevance in Mexico, as discussed below.

Lack of drinking water availability in Mexico

The problem of poor water quality and thus lack of access to safe drinking water for a large proportion of the Mexican population is considered one of the leading contributors to the high levels of soda consumption in Mexico. Even though Rivera's model (presented in Figure 3.1) considers the problem of drinking water access, it fails to analyse the issue in depth as an important risk factor in the causal pathway of soda consumption. This issue may be unique to the Mexican context, and possibly other developing countries, so it might not have been considered in countries where access to safe drinking water is guaranteed by the state.

According to the Food and Agriculture Organization (FAO), a country is water-stressed if the water withdrawn for any purpose is 25% or more of the total renewable water available (FAO, 2016). The latest available data about water use from the FAO shows that in 2011 water withdrawal for human use in Mexico (extracted from a lake or river) reached 80.3 million litres representing 673 litres per person per year and accounting for 17.21% of the total renewable water available per year (3,822 million litres per person/year) (FAO, 2014a). This is a high proportion and close to a profile of a water-stressed country, and worse than in other Latin-American countries. For example, Chile withdraws 35.4 million litres per year (2,147 litres per person/year), representing 4% of total renewable water, and Brazil withdraws 7,830 litres (383 litres per person/year), representing 0.86% of total renewable water (UN Water, 2016). Of the total water withdrawal for human use in Mexico, 77% is for agriculture, 9% for industrial use, and 14% for household use (municipal). This last category includes free drinking water available to the population and it is estimated to be 11,440 million litres of water a year (FAO, 2014a).

In contrast, the use of water to produce soda in the country was estimated to be high. In 2011, the overall beverage production in Mexico by Coca-Cola FEMSA was 15,039 million litres of beverages, of which only 5% (751,965,930 litres) was bottled water with no added sugar or sweeteners. Of the total beverage production 51.6%

(7,761,826,000 litres) were sold in Mexico. For every litre of beverage produced, Coca-Cola FEMSA uses 1.7 litres of water, or a total of approximately 25 million litres of water per year (Coca-Cola FEMSA, 2011). Water use for SSB production in Mexico and sold in Mexico equates to 0.18 % of the national water withdrawal for industry use per year. In 2012 the total beverage production 56.4% (9,766,160,000 litres) were sold in Mexico. Coca-Cola FEMSA used 1.6 litres of water for each bottled litre of beverage sold, equating 0.21% of the national water withdrawal for industry usage. Additionally, any of the two estimated figures are beyond the FAO figures for water withdrawal for 'municipality usage'. This means that, in Mexico: (a) water concessions for industrial use are high compared to water use in other sectors, including the provision of free drinking water; (b) there is a large water use for the production of sugary drinks; and (c) people's access to sugary drinks and industry's access to water for industrial are more than the amount of clean and safe drinking water available for inhabitants (CONAGUA, 2007; FAO, 2014a). Table 4.2 shows the total availability and use of water in Mexico for 2011, and compares it to the reported soda production in 2011 and 2012 by Coca-Cola FEMSA.

Table 4.2 Type of water extraction and usage in Mexico for 2011 and soda production by FEMSA in 2011 and 2012

Type of extraction (2011)	Millions of litres	Estimated % of water withdrawal
Water withdrawn for human usage&		
Agricultural sector	61,580,000,000	77%
Municipality usage	11,440,000,000	14%
Industry usage	7,280,000,000	9%
Sub-total	80,300,000,000	100%
Water withdrawn for non-human usage&		
Hydroelectric	136,100,000,000	82%
Other	28,500,000,000	18%
Sub-total	164,600,000,000	100%
Total extraction (human + non-human)		
Total	244,900,000,000	100%
Coca-Cola FEMSA total beverage production, usage of water and soda consumption in 2011 and 2012		
	2011	2012
Beverage sold (litres) ^{\$}	7,761,826,000	9,766,160,000
Estimate % of water withdrawal for industrial usage	0.18%	0.21%
Total usage*	13, 195,104,200	15,625,856,000
<p>\$ Other soda bottlers (e.g., PepsiCo, Big Cola and Grupo Arca) not considered in this estimate</p> <p>*Usage calculated with the amount reported by the company to use per litre of beverage produced (1.7/L in 2011 and 1.6/L in 2012) with data obtained from: Annual Report Coca-Cola FEMSA 2011, (Coca-Cola FEMSA, 2011, p. 21), Annual Report Coca-Cola FEMSA 2012, Coca-Cola FEMSA, 2012(Coca-Cola FEMSA, 2012, p. 17)</p> <p>&Data obtained from 'Countries profile: Mexico', FaoAquaStat, 2012 (http://www.fao.org/nr/water/aquastat/countries_regions/MEX/index.stm) in the public domain</p>		

Furthermore, lack of access to free, safe drinking water is accepted as a condition under which most of the Mexican population lives, and this has not changed much over time (FAO, 2014b). Public trust in water quality is a problem. As previously mentioned, the link between obesity and access to clean water may be unique to the Mexican context.

Table 4.2 on water extraction shows the relatively low availability of water used for domestic supply (which includes drinking water). The water balance in a growing number of cities and regions is sustained by overexploitation of renewable groundwater. Additionally, 70% of the water bodies have some degree of contamination (CONAGUA, 2014b; UN Water, 2016). In 2016 the UN score for water quality in Mexico was only 60.5 out of 100 (UN Water, 2016).

While the regulatory framework for water access has been constantly modified, quality of water has not been a major preoccupation for politicians (UN Water, 2016). At the same time bottled water in Mexico has become an important business. Bottled water is linked to the soda industry because the same big corporations that produce soda own most of the bottled water brands. Bottled water consumption in Mexico for 2016 was estimated to be more than 170 litres per person (The Economist, 2016).

Another issue for water access is the regulatory framework surrounding it. The current concession of water wells in Mexico is regulated by CONAGUA, a governmental body of the Ministry of Agriculture. Water concessions granted by the state to the private sector rely on a weak regulatory basis, which lacks specific principles (CONAGUA, 2007) (discussed in Chapter 8). Soda producers have used this regulatory situation to frame the use, provision and disposal of water as a socially responsible action (SRA), throughout the soda tax discussion and implementation. Some of these dynamics and how actors link these regulations is discussed in Chapter 8, as it is also related to tax benefits for soda producers (CONAGUA, 2007).

IV. The influence of trade agreements

In the 1950s, Coca-Cola began intense marketing campaigns in Mexico (Nestle & Rosenberg, 2015). As a result, from the 1970s onward sodas were established in Mexican daily life (Soares, 2016). Mexico's elected President in 2000, Vicente Fox, was the former President of Coca-Cola Mexico and Latin America (Soares, 2016). From the time Mexico started to struggle with its obesity prevalence, it was clear that the soft drink consumption played a significant role in the problem (Barquera

et al., 2008). At the time there was no governmental drive to change the food system and national food supplies, despite the overwhelming evidence and attempts by those in public health to initiate changes (James, 2013).

Mexico has been a member of the General Agreement on Tariffs and Trade (GATT) since 1986 and a member of the World Trade Organization (WTO) since 1995. As one of the most heavily involved Latin-American countries in trade agreements, Mexico has tariff reduction schemes with the European Union, which eliminated tariffs on all industrial and agricultural products (with a small list of exceptions). In addition, Mexico has free trade agreements with Israel and Japan (WTO, 2016). According to the International Chamber of Commerce Open Market Index, Mexico is situated in 54th place among the 75 countries examined, which means the country has an average openness to trade (Fringer, 2013).

Mexico applies tariff-rate quotas (TRQs) to agricultural products under the WTO Framework (WTO, 2016). Sugar is one of the products that is excluded from further liberalisation in Mexico (WTO, 2005). From 2009 through 2012, international sugar prices were volatile due to various factors, including shifting demands, availability and climate issues affecting production and distribution. Sugar price was a highlighted consideration by soda producers, and regulations are perceived as a barrier to market entry since they caused the companies to pay in excess of international market prices as mentioned in the 2012 Coca-Cola FEMSA report (US SEC, 2012, p. 9).

One of Mexico's most important free trade agreements is the agreement with the United States and Canada; the North American Free Trade Agreement (NAFTA). The effect such trade agreements cannot be neglected. The effect of NAFTA on agricultural liberalisation in Mexico can be summarised as follows. First, domestic producers started competing with foreign goods, but the overall agricultural trade flows grew. Second, liberalisation improved resource allocation and agricultural activity (Salazar, 2010). Third, the number of imported goods increased under NAFTA. Farmers who produced these goods had to lower their costs so that they could compete with the imported goods. Finally, investment in the Mexican agricultural sector increased significantly (Yunez-Naude & Barceinas, 2002). Even

though the Mexican diet has changed over time, Clark, Hawkes, Murphy, Hasen-Kuhn & Wallinga (2012) argue that four trends in the Mexican diet can be seen after the establishment of NAFTA. First, the consumption of processed dairy foods, such as ice cream and frozen desserts, increased significantly. Second, the consumption of snacks increased from 1.54 billion in 1999 to 1.7 billion in 2001. In particular, the importing of US snacks increased, which caused more intense competition between imported snacks and domestic manufactured snacks (Blouin, Hawkes, Henson, Drager, & Dube, 2010). Third, consumption of soft drinks tripled for adults, which dramatically increased their total sugar intake (Clark et al., 2012). And fourth, the consumption of processed meats grew much faster than the total growth in the consumption of meat (Blouin et al., 2010; Clark et al., 2012).

Sugar has been part of several discussions when it comes to taxing producers. The sugar cane industry has been a relatively important industry for the Mexican economy; it represents 0.05 of GDP and sugar is the largest crop after corn (WTO, 2005). The sugar cane industry employs about 2 million people, and domestic consumption is around 4.5 million metric tonnes, with the largest demand being from the soft drink industry (Geo Mex, 2016). In 2000, President Vicente Fox's government expropriated 27 sugar mills, about half of the annual industry production. Prices had fallen as corn syrup imports grew, and some mill owners illegally discarded sugar on the domestic market. The owners had borrowed heavily to pay growers, and by 2000 the industry owed the government \$3 billion (Malkin, 2004).

Under government management, in 2002 prices of cane sugar were protected by imposing a 20% tax on imported corn syrup-sweetened soft drinks, and on high-fructose corn syrup (HFCS) as an ingredient for foods (WTO, 2005). Only in December 2014, the United States and Mexico agreed to abandon tariffs on imports of Mexican sugar (Malkin, 2004). The tariffs had caused a dispute between the United States and Mexico for breaching the NAFTA regulation and the counterarguments of being an anti-dumping duty (WTO, 2005). The anti-dumping duty is a government protectionist tariff imposed whenever an imported product's price is or might be cheaper than the same product produced domestically. The United States agreed to enact measures that would limit the amount of sugar cane

they allowed into the country from Mexico, as US sugar cane producers complained about Mexican sugar being cheaper. The solution caused disappointment as quotas on Mexican imported sugar to the United States were not a condition of the NAFTA that was established in the early 1990s (Joessph, 2014).

In 2007, the corn syrup tax was removed as mandated by the NAFTA, meaning completely free trade. Therefore when the soda tax was approved in 2013 and passed in 2014, soda producers stopped using sugar cane and opted for HFCS to cut costs, as it was cheaper than sugar cane. Tests of the products have shown that Mexican sodas have both sugar cane and HFCS in equal proportion (Goran, Ulijaszek, & Ventura, 2013). Therefore, removing the corn syrup tax had an impact on sugar cane producers, as the former became a cheaper option for soda producers. In 2014, the Cámara Nacional de la Industria Azucarera y Alcohólica y la Unión Nacional de Cañeros y Azucarera (CNIAA) was producing around 1,400,000 tonnes of sweetened beverages (Radio Fórmula, 2013), and opposed the tax, as it would decrease the already low demand of sugar cane in the country. Also, according to the United States Department of Agriculture's Foraging Agricultural Service, after introduction of the soda tax of \$1.00 peso/litre (US \$0.076/litre), soft drink sales in Mexico dropped more than 5%, followed by a 4% drop in sales in the second quarter, and a 2% decline in the second half of the year (USDA, 2015).

V. The political context

In 2013, Enrique Peña Nieto took office as President after 12 years of opposition rule. Mexico has a federal presidential constitution, with a democratic selection of the president every six years. Peña Nieto had the largest media coverage of the three main candidates and was already mayor in Estado de México, the most populous state in the whole country. Additionally, he was the candidate of the Institutional Revolutionary Party (PRI), an old hegemonic party that had ruled the country for more than 70 years. PRI had only been defeated two times, in the previous two presidential elections (2002-2006 and 2006-2012) (Crumpacker, 2013).

A few months before he took office, a group of students sabotaged an electoral event at a private university in Mexico City and social media protests and demonstrations

against him followed. His party was perceived as highly corrupt (Crumpacker, 2013; Expansión, 2012; García & Treré, 2014) and one which championed old conservative and neo-liberal ideas. These events impacted the electoral process in a very short space of time (García & Treré, 2014). Additionally, the lack of trust and the negative connotation given to the new presidency were relevant as gaining trust and support was a key aim of the entering team (García & Treré, 2014). Health issues are relevant when framed as a means to improve social capital (Baum, 1999; IMCO, 2015a), and the obesity situation in Mexico was seen as a good opportunity.

National obesity policies: from Calderon to Pena Nieto's presidency

Although obesity rates increased alarmingly between 1988 and 1999, it was only after the 2006 Health and Nutrition Survey that obesity started to gain more attention than under-nutrition as a health issue. Although obesity was recognised as a major public health problem by the Mexican government, by the food and beverage industry, and by the wider population (SSA, 2011), there were no important actions against obesity until the government of Felipe Calderon. During the second half of his administration (2009-2012), the government created a number of initiatives to tackle this problem.

In 2008, Calderon's government became concerned with national-level food policy actions. This included in the agenda some of the obesity recommendations made by the WHO in 2003 and 2008 (SSA, 2011; WHO, 2008; WHO/FAO, 2003), such as including food guidelines in schools to improve nutrition, reducing sodium consumption and improving consumer information on packaged foods, and increasing the time of physical activity programs at schools. Several governmental and non-governmental initiatives were started. Governmental initiatives included the publication of the Beverage Guidelines, and the *National Agreement for Healthy Eating* (Acuerdo Nacional Para la Salud Alimentaria - ANSA), a national agreement that included school food guidelines, physical activity programmes in schools, and the introduction of skimmed milk as part of the school breakfast program (SSA, 2010). Parallel to these intersectoral government actions, some non-governmental actions emerged. One of the major food corporations implemented the self-regulatory code entitled *Código Pabi* in 2009, the aim of which was to voluntarily restrict food marketing to children (CONAR, 2008). In addition, food corporations,

led by the Mexican group ConMexico, launched a voluntary Front of Package Labelling Strategy (FOPLS) in 2011. None of these regulatory and self-regulatory actions had any major impact on obesity due to poor execution. For example, the voluntary labelling strategy was not promoted, and it was not presented in a simple, clear format; similarly, the '*Código Pabi*' had several loopholes, such as failing to designate specific sanctions if violated (Theodore et al., 2016). These loopholes included a lack of cohesive actions or regulatory measures since they were only voluntary actions and an 'agreement' to an inter-sectoral compromise, not a mandatory regulation for most of the actions. In addition, most of the compromises outlined by all actors were in need of a designated budget and implementation guidelines. They also lacked a rigorous impact and process evaluation (Avila, 2012, Freaner, 2012; Hernandez, 2012). The timespan between development, implementation and change in administration weakened and limited this initial effort (Barquera et al., 2013; Charvel S, 2012).

VI. Development of a soda tax in the new government's agenda

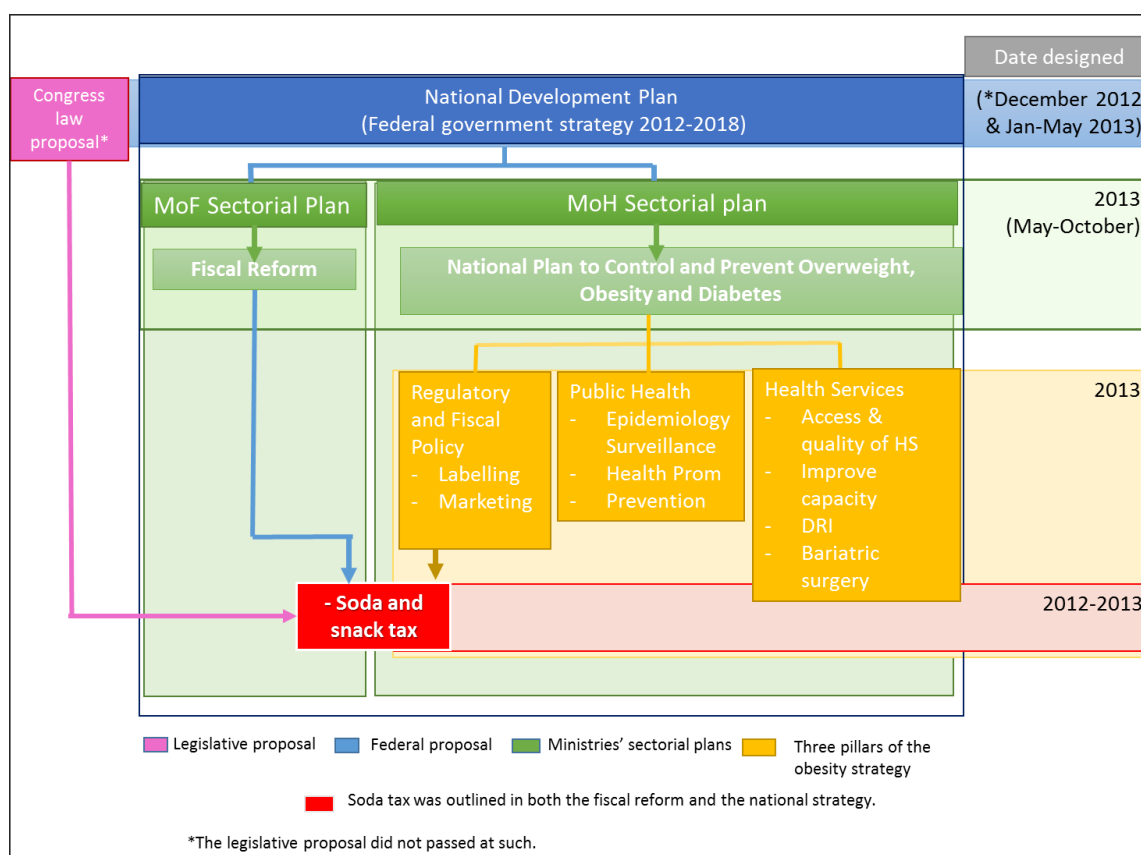
During the presidential election period in 2011-2012, an agreement called *Pacto Por México* was signed. This was a formal agreement signed by three of the main parties running for office in México in 2012: Partido Acción Nacional (PAN), Partido de la Revolución Democrática (PRD), and Partido Revolucionario Institucional (PRI). The agreement specified actions to be addressed regardless of who won. One action was the promotion and improvement of a healthy environment in schools (Pacto for Mexico; SSA, 2012). This was the first attempt to regulate and include in the formal policies a matter of health related to childhood obesity.

The first step for designing policies and agenda setting for the new administration was to draft the National Development Plan (NDP) 2012-2018. The NDP is the Federal Public Administration's plan and budget for all the policies to be implemented during the time in office (Plan Nacional de Desarrollo, 2013). The Ministry of Finance under the Economic Planning and Public Policy Analysis Department oversees the appointment of a team to draft a working document nurtured by proposals from other ministries. The second step of the policy design

is for the ministries to develop their sectoral plans, which outline the strategies of each ministry.

The soda tax policy was conceived from two separate parts of the government. It was first proposed as a legislative initiative by two senators, and then it was adopted by the federal government and outlined broadly in the NDP as part of several multi-sectoral actions to tackle obesity. Only the sectoral plans of the Ministry of Finance (MoF) and of the Ministry of Health (MoH) outlined the soda tax in more detail. The MoF sectoral plan presented it as part of the Fiscal Reform; conversely, the MoH sectoral plan discussed it as part of the National Strategy to Control and Prevent Obesity, Overweight and Diabetes (Estrategia Nacional para el Control del Sobrepeso la Obesidad y la Diabets - ENPCSOD) (SSA, 2013b). The latter consisted of three action plans, or pillars (as named and outlined in yellow in the figure), and the leadership of designing each pillar was assigned to different representatives under the MoH as shown in Figure 4.2.

Figure 4.2 Policy documents related to the soda tax



The ENPCSOD was presented with a monitoring and evaluation plan to be conducted during the execution of the policy throughout the presidency of Peña Nieto. The plan, called the Mexican Observatory of Non-Communicable Diseases (Observatorio Mexicano de Enfermedades No Trasmisibles - OMENT), was a coalition organised by the federal government with a 'technical-scientific' structure combining participants from the private and public sector as well as civil society organisations. The aim was to gather expertise of different backgrounds to build first the indicators for the policy evaluation strategy, and then the actual evaluation strategy (SSA, 2016, p. 14). Chapter 7 will describe in detail the process and participation of different actors to develop the content of the policies related to the soda tax as well as how they set the agenda to implement the policies mentioned in the figure.

VII. Summary

This chapter presents facts about Mexico's health and political situation before the soda tax was implemented. It first highlights the high prevalence of obesity in Mexico and the high levels of soda consumption. It presents the drinking water situation and its relationship with soda production and availability. Water access and quality are compromised, while soda producers heavily use water not only to produce sugary drinks and sodas, but also to produce bottled water. Additionally, international trade agreements and the sugar production and usage in Mexico reflect the relevance of the sugar cane industry's for the country's economy, as well as why sugar cane and soda producers considered it a threat. Finally, the last section gives an overview of the political context on previous obesity prevention policies in the country and highlights the opportunities offered by a change of government as drivers for the soda tax implementation. As Kingdon's stream theory points out, the politics, the problem and the policy coincided in a window of opportunity: The need for revenue (as the politics) and obesity as a public health problem triggered an opportunity for the soda tax policy to occur.

Chapter 5. Key actors shaping the agenda, and an analysis of their networks

I. Introduction

This results chapter analyses and explores the interconnections between actors in relation to the soda tax development. It looks at the links (networks) between actors in order to help explain actors' influence and interests in the soda tax policy, and how these links shaped the policy process. It presents and discusses findings from both the interviews and the documentary analysis.

This chapter first presents why the role of actor networks in the policy process is considered to identify the roles of actors involved in the policy process. Then, it examines the links between actors existing before, and those formed during, the soda tax debate and discusses how they evolved throughout the policy process. The interrelationships of the actors identified during the soda tax are considered as explanatory factors in the formulation of 'frames' used to position the policy problem and its solutions, in the policy formulation and agenda; and in the outcomes of the policy, discussed in Chapters 6 and 7.

The main theoretical components used to analyse policy networks are defined and discussed in the section *Policy network approach* in Chapter 3. Using the Policy Network Approach, emerging from the originally from the Social Network Theory, as a lens through which to explore the relationships that occurred during the soda tax debate, raises important questions of transparency, accountability, and interdependence of the policy process, as evidenced in previous studies (Tantivess and Walt, 2008).

II. Role of actor networks in policy process

Policy making is shaped by actors seeking to use their resources in order to have their concerns included in the policy agenda. A network is a form of coordination and governance with the participation of different state and non-state actors in

government processes (Castells, 1996; Rhodes, 1997; Hajer & Wagenaar, 2003; Thomposon, 2003). Therefore, for this case study some governance principles (defined in Table 3.2) related to power and influence of actors and their networks are considered for the analysis and include: responsiveness, accountability, and participation. These principles are part of the analytical framework to assess the governance of the health system (Siddiqi, 2009) (see Chapter 3 for definitions).

Furthermore, to explore which actors are influential and how influence is structured in terms of networks, this analysis also focuses on the exchange of financial and technical resources (Lewis, 2005). The interrelationships between state and non-state actors can range from minimal interaction to strong collaboration. The Australian government has classified the interrelationships between actors on a continuum depending on time and trust between the parties. This spectrum goes from networking, which involves the exchange of information, through coordination between actors, cooperation and finally collaboration, the closest link. The latter degree of interrelation includes information exchange and resource sharing and facilitates participants' capacity to achieve mutual benefits (VicHealth, 2016).

Parsons noted that a network or community 'seeks to focus on the pattern of formal and informal contacts and relationships between actors which shaped the policy agenda and decision-making' (2005, p. 185). Participants are acting in a 'social system in which other actors' impact upon one another's decisions' (Parsons, 2005, p. 185). Based on this argument, it is possible to identify the structures and dependencies among organisations and actors, for example, when a person is using double roles (Section V) throughout time, to identify the various relationships shaping the policy environment (Rhodes, 1998). Parsons' argument can also be used to help explain the frames used to position the issue and the solution on the agenda, examined in Chapter 6. Identifying links existing before the soda tax helped in explaining the existence of a potential bias or potentially compromised frames of the policy problem and policy solution, as discussed through some examples below. Furthermore, it highlights potential conflicts of interests some actors might encounter while setting the soda tax policy agenda. The concept of 'conflict of interest' as defined for this work is 'a set of conditions in which professional judgement concerning a primary interest [...] be unduly influenced by a secondary

interest [...]’ (Thompson, 1993). Section III describes the actors involved in the policy process, and Section IV explains and analyses the links identified in this analysis.

III. Actors shaping the soda tax agenda

As described in the ‘Methods’ section in Chapter 3, actors were identified based on a literature review and by considering all sectors suggested by Star and Hovland (2004) when analysing actors (Figure 3.5). For this research, the actors involved in the soda tax are broadly categorised as follows: international organisations (agencies and international civil organisations), government organisations (including different sectors of the government), academics, national civil society organisations (CSOs) and think tanks (TTs) and private-sector organisations, including media actors, food and beverage industry (F&BI) and marketing firms for soft drinks. The following section briefly describes who the actors were, how they were involved and what their main positions and influence were before and during the soda tax debate. In this thesis, ‘influence’ or ‘power’ is defined as ‘the capability or ability to accomplish something’ (Schmeer, 1999). Annex 4 provides a full mapping of the actors with a detailed description of the background of each actor related to the policy and the rationale used to consider them relevant for the soda tax policy analysis. In this chapter, a brief description of who the actors are is presented before the full analysis.

International organisations

Six international organisations were identified as being involved in the soda tax policy process, as listed in Figure 5.1. They were either agencies such as PAHO or international civil or consumer organisations that supported the policy process.

Figure 5.1 International organisations identified as being involved in the soda tax policy

PAHO (Pan-American Health Organisation)
Bloomberg Philanthropies (BP)
World Obesity Federation (WOF)
Inter-American Development Bank (IDB)
World Public Health Nutrition (WPHNA)
Centre for Science in the Public Interest (CSPI)

For details of the organisations and their relationships to the soda tax policy, see Annex 4.

Government

A range of government actors were involved in developing the obesity policy in Mexico, including members from several ministries, specialized entities of the federal government and Senators and Deputies in legislative power. Figure 5.2 shows the government organisations identified as being involved in the soda tax policy.

Figure 5.2 Government organisations identified as being involved in the soda tax policy

Ministry of Health (MoH) (Secretaría de Salud- SSA)
Ministry of Finance (Secretaría de Hacienda y Crédito Público - SHCP)
Ministry of Economy (MoE) (Secretaría de Economía)
Ministry of Public Education (Secretaría de Educación Pública - SEP)
Ministry of Social Development (Secretaría de Desarrollo Social - SEDESOL)
Federal Commission to Protect Against Sanitary Risks (Comisión Para la Protección Contra Riesgos Sanitarios - COFEPRIS)
National Water Commission (Comisión Nacional de Agua - CONAGUA)
Senators
Deputies
Instituto Nacional de la Infraestructura Física Educativa (National Institute of Education Physical Activity Infrastructure - INIFED)

For details of the organisations and their relationship to the soda tax policy, see Annex 4.

The role of some government organisations has changed over time. For example, the Ministry of Public Education (SEP) was highly involved in the 2010 obesity policy ANSA but not in the 2012-2018 policy agenda. The Ministry of Finance (MoF)

was supposed to be highly involved in implementing the ANSA, whereas in the incoming presidency in 2012, they were assigned to be core promoters of the federal government's soda tax. The Ministry of Social Development (SEDESOL) was appointed in both administrations to implement actions to improve access to healthy foods. Annex 4 describes some actions government organisations were taking for obesity prevention and the role they played in obesity and fiscal policies.

Academic organisations

According to a PAHO report, academic organisations have been actively engaged in the obesity agenda for the past 10 years in Mexico (PAHO, 2011). In 2011, this report recognized the 'relevant' role academic institutions play in Mexico to position the obesity issue (see Annex 4) (PAHO, 2011). They were also identified as influential actors in the soda tax agenda and as key 'policy entrepreneurs' (as described in Chapter 7). Figure 5.3 shows the identified academic actors involved in the soda tax policy.

Figure 5.3 Academic organisations identified as being involved in the soda tax policy

Mexican Academy of Medicine (Academia Nacional de Medicina - ANMM)
National Institute of Public Health (Instituto Nacional de Salud Pública - INSP)
National Institute of Medical Science and Nutrition Salvador Zubirán (Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán - INCMNSZ)
Centre of Economic Research and Teaching (Centro de Investigación y Docencia Económicas CIDE)
National Autonomous University of Nuevo León (Universidad Autónoma a de Nuevo León - UNAL)
Mexico Autonomous Institute of Technology (Instituto Tecnológico Autónomo de México - ITAM)

For details of the organisations and their relationship to the soda tax policy, see Annex 4.

Civil society organisations and think tanks

Various CSOs were involved in influencing the soda tax agenda, as listed in Figure 5.4. Most of the coalitions and networks among CSOs were built during the process, such as ContraPESO, whereas some of them already existed, such as ASA (see Annex 4 for details). Adam and Kriesi (2007) referred to the former as issue networks and to the latter as a policy community (Chapter 3). The position and power of some

organisations and think tanks shifted throughout the policy process, which is discussed in the following three chapters.

Figure 5.4 CSOs and TTs identified as being involved in the soda tax policy

National Association of Diabetes (Asociación Mexicana de Diabetes - AMD)
Mexican Diabetes Federation, A.C. (Federación Mexicana de Diabetes A.C. - FMD)
Mexican Foundation for Health (Fundación Mexicana para la Salud - FUNSALUD)
ContraPESO
Mídete Foundation (Fundación Mídete - FM)
The Consumers Power (El Poder del Consumidor - EPC)
Alliance for Healthy Eating (Alianza por la Salud Alimentaria - ASA)
Aspen Institute (AI)
Mexican Institute for Competitiveness (Instituto Mexicano para la Competitividad - IMCO)
Polithink

For details of the organisations and their relationship to the soda tax policy, see Annex 4.

Private sector organisations including the food and beverage industry

Private sector organisations including F&BI representatives and media representatives were also key players in the policy debate (as discussed in Chapters 7 and 8). Figure 5.5 lists the main private sector organizations as being involved in the soda tax policy; these are described in detail in Annex 4. The relationships and networks among the private sector actors ranged from corporate consortiums such as CONCAMIN that previously existed, to coalitions supporting their own non-governmental organisations, called BINGOS (business interested non-governmental organisations) (Hastings, 2013, p. 140). Finally, the industry created links with other organisations to create front groups (White & Bero, 2010), and engaged in constituency building with government actors and academics.

Figure 5.5 Private sector organisations identified as being involved in the soda tax policy

National Association of Soda and Soda Water Producers (Asociacion Nacional de Productores de Refresco y Agua Carbonatada - ANPRAC)
Mexican Consortium of Consumers Industry (Consejo Mexicano de la Industria de Consumo - CONMEXICO)
Confederation of Industry Chambers (Confederacion de Camara de Industriales CONCAMIN)
Sugar Cane Producers' Union (Unión Nacional de Cañeros - UNC)
Coca-Cola FEMSA (Fomento Empresarial Mexicano)
ARCA Continental
PepsiCo
PepsiCo Foundation
Coca-Cola Foundation
National Chamber of the Sugar and Alcohol Industry (Cámara Nacional de las Industrias Azucarera y Alcoholera CNIAA)

For details of the organisations and their relationship to the soda tax policy, see Annex 4.

These five groups of actors interacted throughout the policy development. Some of the relationships and links among them as well as those that developed during the soda tax debate are discussed below.

IV. Networks and links among actors identified before and during policy process

Different types of networks and links were found among actors and include: (1) individuals playing double roles in two or more organisations (Annex 4), (2) members of advisory panels from different sectors being involved in policy design or advocating for policy changes, (3) financial links between groups, and (4) partnerships being entered into for a particular purpose, such as advocacy activities or policy implementation or evaluation. An overview of the actors' links are shown in Figure 5.6. The author developed this figure. The distances between boxes are not representative of the closeness of relationships between actors. The direction of the arrows show in which direction a relationship between actors was identified. Each colour represents the type of relationship identified and included: advocacy or

lobbying, supporting arguments, technical support, personal double roles, technical collaboration, advisory boards, financial support, or actors as part of the federal government. Additionally, annex 5 presents a table with examples of relationships identified based on a general categorization using types of networks (issue networks or community networks defined in chapter 3 p. 61) the resources interchanged and elements of governance that might be at stake.

Constituency building with academics and the civil society

Constituency building has been part of the ‘playbook’ of private sector businesses such as tobacco and alcohol companies (Brownell & Warner, 2009). Establishing relationships with key leaders and policymakers is one way to influence policy (Brownell & Warner, 2009; Mialon, Swinburn, Wate, Tukana, & Sacks, 2016). The analysis presented in this chapter shows how key actors from the main F&BI companies in the country were somehow related to the ENPCSOD. Chapter 7 describes in detail the formal participation of these actors in the soda tax policy design, and some existing relationships that are relevant to the structure and process of the soda tax policy are discussed below.

Multiple roles of individual actors

Multiple roles of individual actors, particularly the ‘revolving door’ concept of individuals changing job roles between public and private sectors, is a well-known practice among representatives of private sector organisations including the F&BI. Two think tanks and policy advocacy organisations, AI and IMCO, were among the organisations in Mexico whose directors or consultants held influential roles elsewhere. Both organisations were invited to participate in the soda tax evaluation. For instance AI’s board included the former head of Coca-Cola Mexico, the Dean of the well-known private university ITAM (Instituto Tecnológico Autónomo de México) and the Vice-President of Walmart. The consultants included Jaime Zabłudovsky, the former head of CONMEXICO (The Aspen Institute). IMCO had among its board members the Chief Executive of Grupo Bimbo, the largest packaged food producer in Mexico with 11.4% of the market share (Euromonitor, 2016), and Jaime Zabłudovsky, the former head of CONMEXICO, Director of CONACYT, and head of the CEE (Consejo Coordinador Empresarial [Business Coordinating Council]) (IMCO, 2016).

Financial links between the food and beverage industry, academia and government agencies

Financial links were found among organisations involved in the soda tax. Some of these relationships included government organisations as a third party, as shown in Annex 5. One example, is a funding program to improve water and sanitation in poor communities, part funded by PepsiCo and part by international development agencies, as stated in a PepsiCo company report. This can be seen as a collaboration (exchange of information, resource sharing) or the formation of an issue network:

Funded with a loan of \$450 million dollars from the Inter-American Development Bank, which eventually benefited 600,000 people with access to drinking water, and about 390 thousand people with access to sewerage and sanitation in rural areas in 31 states. Funding estimated at \$1 million will come from AquaFund, a program funded by the IDB, PepsiCo Foundation, Swiss Cooperation, and the Austrian government. (PepsiCo, 2011)

PepsiCo Foundation and Coca-Cola Foundation are clear examples of F&BI funding their own non-profit organisations, as ‘front organisations’ that aim to change public perceptions about the companies or the F&BI in general through corporate social responsibility actions. These actions improve their reputation, as a representative of the media phrased it:

It is trendy (for these corporations) to clean their actions, and to promote their good will with consumers [...] by including actions such as sponsoring documentaries or social responsibility actions (MIM).

Some links and partnerships between F&BI and CSO were not disclosed to the public during the soda tax debate. CSO’s did not make public any conflicts of interests, for example at COFEPRIS workshops for the PND as described in Chapter 7. These included links between the FMD and Coca-Cola, BID and PepsiCo, Coca-Cola and CONACYT, Coca-Cola and the AMD and the INNSZ and F&BI (Annex 4 and Annex 5). For this research, some CSOs known to be in partnership with the F&BI refused to

be interviewed; these included Mexicanos Activos and Mexico se Mueve, as mentioned in Chapter 3 who were two “front organisations” or BINGOS focusing investments and policy emphasis on physical activity measures.

Funding research and establishing front groups

As noted in Chapter 3, one of the strategies used by the F&BI is to sponsor or fund research (Marks & Thompson, 2011; Newton et al., 2016). This was also found in the case of the soda tax. Some academic institutions, both private and public, were found to have been funded by the F&BI (Annex 5). First, the Coca-Cola Foundation sponsored research through CONACYT, the governmental agency that supports research in the country. In 2015 they launched a prize for any scientific project that will improve ‘science and technology’ and contributed to capacity building in the country (CONACYT, 2015). CONACYT also partnered with the Institute of Beverages for Health and Wellbeing (Instituto de Bebidas para la Salud y el Bienestar), a research group fully funded by Coca-Cola (Annex 4). This partnership was in the public domain as it was made clear in the announcement of the award:

CONACYT in coordination with the Coca-Cola Foundation sponsored the First Prize in Biomedicine Research ‘Dr. Rubén Lisker’ to Dr. [...] for his project ‘[...] the Elimination of Leukemic Cells’ (Coca-Cola Mexico, 2015b).

In 2015, the Coca-Cola Company partnered with the Mexican Diabetes Association, whose branch in Monterrey on 8 July 2015 hosted a scientific event called ‘Physical activity for people living with diabetes’. The event was hosted by the Mexican branch of an organisation called ‘Exercise is Medicine (Movimiento es Salud)’ which is funded by Coca-Cola. According to Exercise’s annual report, ‘Coca-Cola also provided logistical support for the event’ (Nestle & Rosenberg, 2015, p. 816).

Additionally, several networks and coalitions were created during the public discussion about the soda tax, before it was approved in the Fiscal Reform. The F&BI did not publicly disclose that they partnered with health organisations and the Mexican Federation of Diabetes (FMD, 2016; Ramirez, 2014), nor did they publicly announce their support for certain BINGOS (Business Interests non-government

organisation). For example, one group called Sweeten your Life (Endulza tu Vida) was sponsored by the sugar industry (CNIAA) (Ramirez, 2014); it tried to legitimise itself by including registered nutritionists in its leading team to give recommendations about sugar consumption (Hablemos de azúcar, 2016). Furthermore, the F&BI participated in sponsoring organisations such as Mexico is Moving (Mexico se Mueve), Active Mexicans (Mexicanos Activos A.C.) and The Centre for Consumer Freedom (Centro para la Libertad del Consumo) (CLC, 2013; Mexicanos Activos, 2016). The first two were organisations who were set up to promote physical activity, and the third one was a front group advocating for the right to free choice.

Additionally, after the soda tax was implemented the academic institution UNAL's role as an agency of the obesity policy was compromised. This university was appointed to design the indicators for evaluating the obesity policy, and during this period received money from the National Association of Soda and Soda Water Producers (Asociacion Nacional de Productores de Refresco y Agua Carbonatada - ANPRAC) to publish a report on the impact of the soda tax just one year after the tax implementation. This is discussed in detail in Chapters 6 and 8. Also, the F&BI sponsored academic work on the impact the soda tax had on obesity after one year of implementation. It was published by a group of economists at ITAM, and it framed the levy's effect as minimal:

The study that CONMEXICO and ANPRAC contracted with ITAM concluded under strict academic independence that the soda tax in 2014 (the first year of the levy) did not significantly reduce caloric consumption [...] it only caused a reduction of 6 of the 3,200 daily calories consumed by an average Mexican. (Ramirez, 2016)

The report mentioned that the sponsors had no influence, regardless of the obvious bias the narratives used against the soda tax:

Kantar World Panel México. The current paper sprang from a collaboration with CONMEXICO in which they helped us get the data from KWP. CONMEXICO did not have any veto power nor influence

over the results. Any remaining errors are ours only. (Aguilar, Gutierrez, & Seira, 2015)

Other financial support given by F&BI to actors involved in the policy process is described in Chapter 6 while analysing the process of framing the impact of the soda tax. Some of them include: the link between CONMEXICO and ITAM, ANPRAC and UNAL; and Nestlé and FUNSALUD, as explained in the previous section (refer to acronyms index).

Food and beverage industry constituency building with government

Three types of formal links were identified between the F&BI and the government. First, multiple roles of individuals across government and industry. Second, memberships of advisory boards; and third, partnerships with government agencies for implementing, monitoring or evaluating policies related to food and water provision.

‘The revolving door’

Dr. Mercedes Juan was the Executive President of the CSO FUNSALUD until December 2012 and was appointed the Secretary of Health in 2013. The strategy against obesity, ENPCSOD, came into effect under her leadership. She did not have a strong position on the soda tax when it was first proposed by the Senate and the MoF, as discussed in detail in Chapter 7. However, in 2014 she maintained that it was an effective measure in reducing soda consumption. After the first discussions on the impact of the soda tax became public in 2015 and important discussions on conflicts of interest in the Ministry of Health (MoH) were raised by civil society, she was replaced by Dr. José Narro, the former head of National Autonomous University of Mexico (Universidad Autónoma de México - UNAM).

Additionally, a few members of the FUNSALUD board have been part of the federal government, and the organisation’s general advisors include e.g. Jaime Zabłudowsky, ex-General Director of CONMEXICO and a key dealer in the NAFTA treaty who also served as an advisor in other think tanks’ evaluation programs, as with Aspen and IMCO (as explained in Annex 4) (Funsalud, 2016). Major transnational corporations and political leaders argued that it was time for all those

concerned with the development to move forward, away from a 'confrontation' with each other and toward a 'cooperation' and 'dialogue' to tackle the urgent issues of the day (CONCAMIN, 2015).

Funding and technical support

The F&BI provided both financial support and technical support to the government. The F&BI partnered with government with various government organisations, mainly for the implementation of parallel policy actions such as the provision of drinking water in schools (e.g. CONAGUA and INIFED, p. 181 & p. 246), or technical support, for example, for the establishment and evaluation of the obesity policy of OMENT (as described in Chapter 7 section IV, p 162). The types of support are part of strategies provided by the industry were either as public-private partnerships (PPP) or corporate social responsibility (CSR) actions. PPP are agreements between the private sector and the government to meet government or social needs, and rewarding the private sector based on possible outputs (Sharma & Bindal, 2014).. CSR has been defined as 'the ethical principle that an organization should be responsible for how its behaviour might affect society and the environment' (Jobber & Ellis-Chadwick, 2012, p.134).

Other relevant example found to be relevant to the policy process was the partnership between, CONAGUA, the World Bank and Coca-Cola FEMSA to provide water to selected poor Mexican communities:

In 2012 the World Bank gave a loan of 250 million dollars to the National Water for the program called PROMAGUA [...] Also, Coca-Cola obtained seven government concessions to provide water with them to the poorest communities, and they would not have to pay any more the water service charges to the government. (Agua Org, 2016)

A number of educational programs and partnerships to promote science and technology were also funded by companies such as PepsiCo. In 2015 the PepsiCo Foundation signed an agreement to support the International Youth Foundation (IYF) with a training program called 'Key to the Future' aimed to prepare young students from the 39 campuses of the National College of Professional Technical

Education (Colegio Nacional de Educación Profesional Técnica - CONALEP) in the State of Mexico for integration into the labour market (CONALEP, 2016).

As discussed in Chapter 8, corporations frame actions as a Corporate Social Responsibility (CSR) while governments frame some of these actions as public-private partnerships (PPP). Although actions framed as CSR and those framed as PPP may effectively have the same results, there are contradictions as the public may perceive CSR as separate from government. The government and F&BI links and collaborations should be a matter of public concern, as results show policymaking is embedded in a conflicted environment where the F&BI has a role of influence and power over policymaking. This is shown in Figure 5.2, where the green and blue arrows representing links between the MoH and the F&BI actors identified, outnumber the links the MoH has with independent academic institutions or international agencies, supporters of the soda tax and other health policies. As discussed in Chapter 6, this close relationship endangers the primary aim of the soda tax, namely, of protecting health. The identified links highlight the normalisation of connections among actors that go beyond common interests and instead have competing fundamental aims and goals toward health and other objectives, thereby jeopardising any attempt toward public health solutions for obesity, as other case studies have found (Collin, 2018.).

International agencies' support to civil society organisations and academics

International organisations have been recognized in the literature as actors influencing public health agendas at the country or regional level (Lee & Goodman, 2002, p. 97; Tantivess & Walt, 2008). At least three of them, PAHO as an agency, and BP and WOF as civil society organisations, have been active during the discussion of the soda tax, and they have repeatedly disclosed their position on the soda tax during the policy discussion (Annex 4) (BP; PAHO, 2015). Other organisations such as WPHNA and CSIP have provided support by issuing a number of press releases as part of the network of certain national civil societies (see Chapter 8).

Three main ways of involvement of international agencies were identified included: taking part of advisory committees, such as the case of PAHO with the Senate

(Annex 4 and Annex 5); provision of financial support for research; and advocacy groups and support in framing the debate (Annex 4, Annex 5 and Chapter 8).

Funding research and advocacy strategies

In Mexico, BP provided technical and financial support for ‘an obesity prevention program’ (BP, 2016). In 2012, BP financed a \$10 million three-year program that was independent of the soda industry. The money was used to support a think tank, an academic institution and a civil society (Donaldson, 2015), calling them ‘partners’. The funding sources were stated on the agencies’ websites, where they mentioned that:

For the first time, the financial power of Mexico’s soda industry faced a serious challenge. (BP)

BP influenced the wider policy debate by providing resources for academics to publish evidence supporting the soda tax (Colchero et al., 2015). BP’s support to national CSOs was one of the main strategic links which supported the soda tax implementation by shifting the power of actors involved in the obesity ‘network’. The influence of financial support for civil society groups advocating for the tax was a key factor in this case study that allowed these pro-sugar tax groups to gain support of other civil society organisations (Nestle & Rosenberg, 2015), well-known international scholars and some well-known journalists (Chapter 8) (Donaldson, 2015).

BP paid for media campaigns designed and promoted by the ‘partner’ civil society groups and with support of academics, so that they could gain wider credibility for their arguments supporting the soda tax. For example, Dr. Lustig, a well-known international expert in obesity, was invited to talk to the media paid for by BP. In May 2013, he participated in a forum called ‘The Sugar Pandemic: Policy vs. Politics’ and spoke about the harm caused by sugar and soda consumption to people and how the F&BI uses its influence to block effective public health policy. The overall paid-for efforts resulted in nearly 800 media stories on obesity (Donaldson, 2014). This meant that for the first time, the coalition of actors supporting the soda tax was well funded and had wide support of strategic groups and public-interest lobbying firms, as a member of the TT mentioned:

Mexico's left party, the PRD, did support the tax. And the industry had never before faced an opposition with Bloomberg money. 'That levelled the playing field' said Ricky Arango, who heads Polithink, a public-interest lobbying firm Bloomberg hired to persuade legislators. (Nestle & Rosenberg, 2015)

Academics were subsequently able to make their positions clearly heard in newspapers and blogs. A BP report explained how the success of the soda tax was achieved through their strategy which centred on two activities in particular: paid and earned media campaigns and formal lobbying, both of which leveraged scientific evidence and a rigorous understanding of the political context (Donaldson, 2014).

International organisations' support for the soda tax policy was also related to other aims, including: positioning themselves for the future, building relationships to further influence national policies; and supporting corporate social responsibility and PPP. The first is illustrated by the framing the BP page used to promote its own founder, Michael Bloomberg. He was portrayed as a person who helps his country and other countries to safeguard public health (BP, 2016) indicating that BP's action might also serve personal purposes of its founder. The second aims to improve the representation of groups with the same interests who are a minority at the policy discussion table; this includes support such as resources, tools and expertise given by BP and PAHO to national CSOs as 'policy entrepreneurs' (Donaldson, 2015; PAHO, 2015). The third relates to binding international organisations like BID with the private sector and with policymakers during policy implementation or during the policy design (e.g. PAHO with MoH).

Academic collaborations to build evidence

Two main collaborations were identified as key aspects in the policy process for the soda tax. The first was the collaboration between the ANM and the INSP. Researchers from several prestigious institutions published a book titled 'Obesidad en México: Recomendaciones para una política de Estado' (Obesity in Mexico: Recommendations for a State Policy) on 30 January 2013. The book content covers various topics related to obesity, including recommendations for a policy plan to

address the obesity epidemic, the aetiology of obesity and the main causes of this problem. The content was used repeatedly in forums and discussions on the soda tax and other policies. It presented Mexico's situation in relation to obesity and provided some suggestions on the regulations needed to improve public policies for obesity and diabetes (Rivera-Dommarco, Hernández-Ávila, Aguilar-Salinas, Vadillo-Ortega, & Murayama-Rendón, 2013; Rivera, 2013).

The second was the collaboration between the INSP and the think tank IMCO to publish a report that mapped policies selected in the strategy and compared them to the benchmark indicators produced by the Cancer Research Institute. This resulted in the publication '*Kilos de mas, pesos de menos: Los costos de la obesidad*' (More kilos, less pesos: The costs of obesity) in 2015 (IMCO, 2015a). This study estimated the social costs of obesity, including expenditures on medical treatment and productivity losses due to premature mortality and work absenteeism. It also reviewed the public policies that had been adopted to address this problem and compared their design with international benchmarks to provide some recommendations (IMCO, 2015a).

These academic collaborations are part of the coalition-building process for framing the problem and its potential solutions (Chapter 6 page 122). These initiatives are promoted by academic 'policy entrepreneurs' and shape public narratives. Chapter 6 discusses framing and how it impacts the policy process in further detail. The main issue in the second collaboration discloses a potential compromised position from IMCO, as it has F&BI members on its board and had worked with industry who opposed the tax; while the INSP was one of the allies in promoting the soda tax.

Advocacy groups' and civil society organisations links to government officials

A number of civil society organisations had links with government officials. The most relevant relationship seen for the soda tax was the relationship between a key Senator and civil society organisations (Fundacion Midete, ContraPESO and Polithink), who together designed the soda tax legislative proposal in 2012, as explained in detail in Chapter 7 (page 147). Data did not show a direct link between the federal government and civil society groups pushing for the soda tax before the soda tax came into effect. However, they were linked through a third party (as

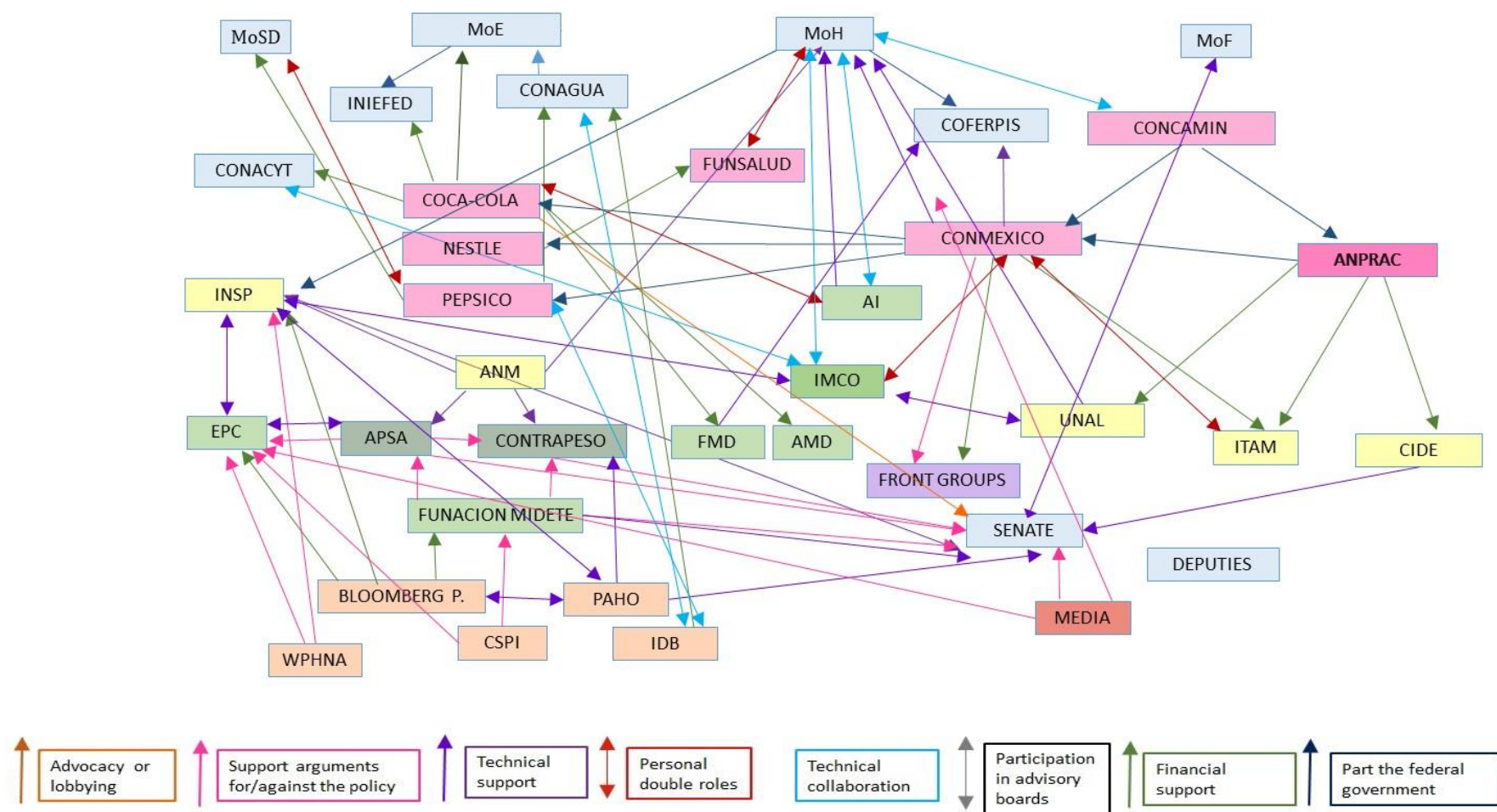
described in the policy formulation in Chapter 7 (page 150)). At the time of the soda tax discussions, PAHO led a multi-disciplinary group that included members of the MoH, civil society and academia (PAHO, 2015, p. 42).

V. Networks and links representation

Figure 5.6 is an organisational network¹ representation summarising the relationships described in this chapter, Annex 4 and Annex 5. It identifies different degrees and forms of relationships among actors. Policy actors' networks and type of relationships are indicated by coloured lines and arrows that show the relationships among them. The colour of the box represents the type of organisation. Civil society groups are represented in green; academics in yellow; government agencies in blue; and F&BI and consortiums or boards of actors in red. This graphic representation is at the organisation level; it differs from other types of network analysis used in public health, such as social networks (social support for a particular population), disease transmission networks or information transmission networks (information to communities and consumers in health promotion) (Luke & Harris, 2007).

¹ The organisational network is a 'paradigm to consider connections among different components, implications of interactions and the transdisciplinary thinking and engagement of those who have a stake in the outcome to govern the course of change' (Leischow SJ, Milstenin B, 2006 p. 403).

Figure 5.6 Links identified among actors before, during and after the soda tax



Key: Refer to the 'organisations' section in the Glossary for acronyms. Note: some relationships are illustrated along chapter 5, 6, 7 or 8.

IV. Summary

Complex relationships among various groups and actors in the soda tax policymaking process were identified. These included relationships between companies and the government, civil society groups and international organisations, academics and industry, think tanks and industry consortiums, F&BI and ministries, academics and activists and civil society and legislators. Some were advisory relationships, and some were financial relationships, collaborations, consultations or even situations of nepotism in high-level positions (Expansión, 2013; Vanguardia, 2013).

Network analysis is a useful path to identify the opportunities and constraints during the process, although it is a complex and very delicate research as it might touch upon various sensibilities, of actors involved in the analysis. However, the public domain of such relationships has been shown to empower public health interest processes, as shown in theories on agenda setting and other case studies (Kraak, Swinburn, Lawrence, & Harrison, 2014; Rasheed et al., 2017; Tantivess & Walt, 2008).

The main findings of this chapter on actor mapping suggest that some relationships and links contributed to and influenced the agenda setting. In several theories of policy analysis, groups and networks represent a key element of policymaking (Marsh & Smith, 2000; Silke & Kriesi, 2007; Tantivess & Walt, 2008). The policy process depends on how the relations among interested parties develop. Each actor accepts as a reality, through their own lens, the social climate which will best suit their interest for their own success. Public arguments provided by actors about a positive or negative position regarding the soda tax may merely be a publicly acceptable justification for their own political interests. However, publicly unrecognised interests, private relationships, sources of support and double roles can offer a better understanding of the policy actions.

Mapping the actors involved in the policy (Section II and Annex 4), and analysing the type of networks helps to reveal a further understanding of their views and whether they are potentially compromised. It also raises key questions about

conflict of interests, accountability issues (who is accountable to whom and through what mechanisms), representation in the formal policy process, power imbalance around the policy debate and responsibility shifts in who is leading certain actions and how. Answers to some of these wider questions go beyond the scope of this thesis; however, it provides an opportunity to examine particular contextual issues that drove the soda tax in a certain direction and enabled it to happen while at the same time considering the issues that restricted the development.

Chapter 6 explore actors' views and perceptions used to frame the policy problem and its potential solutions, and how evidence was used to aid these narratives. Chapters 7 and 8 exemplify how the process occurred in these particular settings (narratives, structures and environment).

Chapter 6. Framing the soda tax policy

I. Introduction

This chapter explores the interpretations, perceptions and opinions of actors involved in the soda tax by using framing theory. Policy positions and narratives used by different actors (called frames- see page 64) analysed in this chapter help to understand the policy formulation, agenda setting and actions undertaken by different actors throughout the policy process. Comparing and contrasting the frames used by different actors (or package of ideas- Gitlin 1980) about the policy problem and its solutions also helped to identify policy controversies (Hawkins & Holden 2013a), and the policy dynamics (John, 2013b) surrounding the soda policy tax debates.

This chapter first presents how actors framed the policy problem, followed by how the solutions to that problem were perceived. Then the frames and arguments used to position the evidence and other socio-political factors are presented to understand how the policy debate occurred and how such frames supported or hindered the soda tax and its outcomes.

Frames highlight certain aspects of a situation while obscuring others to define problems, diagnose causes, make moral judgments and suggest remedies (Entman, 1993). For example, actors framed the problem as either a health (obesity) or a financial (lack of government income) problem, that could be solved by a soda tax. As explained in Chapter 3, framing theory offers a set of concepts which can be employed to understand how individuals, groups and societies perceive and communicate about social phenomena (Koon et al., 2016). A frame is a lens through which to interpret a situation within a given set of assumptions (Koon et al., 2016). For example, in the context of this study, the way in which someone frames the 'causes of obesity' suggest a particular set of values and assumptions which characterise the policy context) in a particular way. It also opens up and closes off particular policy solutions, which are compatible or incompatible with however the issue was framed.

II. Framing the policy problem

Obesity and soda consumption were the predominant frames for the policy problem emerging from the data. The ‘obesity problem’ was framed by most interviewees either as a result of an addiction to food or as a lack of conscious eating, and the arguments focused on it being a personal, behavioural issue rather than a public problem. ‘Soda consumption’ was framed as a problem that was ‘difficult’ to solve (Section III). Other actors focused more on the multi-causality of obesity in contrast to singling out products like soda. This debate was used both negatively and positively toward the soda tax as a solution.

The other main framing was the issue of government finances. Only a few actors mentioned revenue generation as the objective of the policy, as a member of the MoF pointed out:

It [the soda tax] implementation had to do with the fact that the President liked it, because it is a very good way to increase revenue.
(CSM)

It was only after the Fiscal Reform, which also contained other taxes such as those on pet food and gasoline, that the framing of the soda tax as a solution to the government’s lack of funds was commonly observed in documents, media and publications (Cozo & Cozo, 2006). These different frames found around the ‘problem’ or ‘policy problem’ are explained further in the next sections.

Framing the determinants of obesity

The determinants of obesity were commonly framed as a personal choice or as individual behaviours influenced by certain environmental factors both among the actors interviewed or in reports published by their organisations (ANPRAC, 2016; Chapa-Cantú, Flores-Curiel, & Zúñiga-Valero, 2015). For example, a report prepared in 2015 by the UNAL, which was sponsored by the soda industry, emphasises personal lifestyle factors:

Obesity is a multifactorial problem involving feeding habits, lifestyle, genes and physical exercise, among others. [...] Lack of exercise and the availability of food in abundance are considered the two main causes of obesity. However, there are other factors that contribute to obesity, such as reduced sleep times, changes in room temperature (through the use of air conditioners), reduced cigarette consumption, increased use of medications (antidepressants), among many other things. (Chapa-Cantú, 2015, pp. 26)

In contrast, the ANM's academic group, which was a strong supporter of the soda tax, highlighted the role of excessive consumption of foods with high energy density, high consumption of caloric beverages, low consumption of fruits and vegetables and low physical activity as key determinants of obesity. In their book the ANM refers to research showing that 21% of the rural areas studied in Mexico did not have fruits available for sale on a regular basis, and 13% did not have vegetables available (Rivera Dommarco, Perichart, & Moreno, 2012, p. 7). The book also emphasized the high availability of foods that were high in fats and sugars and SSB available in the same areas (Rivera-Dommarco et al., 2013, p. 2). These examples highlight the framing used to demonstrate that availability of foods plays an important role in the population's diet. This frame is consistent with the frames used by public health researchers (Ghosh-Dastidar et al., 2014) and those used by the civil society when calling upon the government to act by improving access to water and healthy food in their manifesto (Alianza por la Salud Alimentaria, 2012b).

Framing soda consumption as a problem

It was a common belief among interviewed actors that soda consumption was a problem, regardless of their background, as indicated by the quotes in Figure 6.1. Most actors interviewed perceived soft drinks as a commodity affecting health.

Figure 6.1 Perception and frames to describe the ‘soda consumption’ problem in Mexico

Actor	Quote
Civil society	In Mexico, it [soda consumption] is a big problem, there are many factors to explain why, but one of them is soda consumption, [it is] higher than in any other country.
Legislator	Mexico is the number one soda consumer per capita per year, with 167 litres per person per year
Academic	Well, soda consumption in Mexico is high and it is very harmful, we are a society of high consumption
Ministry of Health	The problem is not having one sweetened beverage, the problem is the amount and frequency of consumption

Frames about the determinants of soda consumption were around personal choices, access to water, addiction to these beverages and the social construction of soda being a reward and a desirable thing to purchase. For example, an academic mentioned:

When the only reward we can afford is soda, well we have problems [...]. Food and sodas are the safest way to please ourselves when resources are limited. (ACA)

Moreover, the cultural meaning soda has for Mexicans was a common frame in interviewees’ accounts. Nevertheless, the roots of this behaviour are not well understood or described in the accounts. The next section describes findings around this frame.

The cultural meaning of drinking soda

In addition to issues of soda availability and personal choice, most interviewees regardless of background, believed that soda has a deep cultural meaning and that drinking soda has an emotional value for Mexicans. In small indigenous towns, advertising for soda even merges with state signs and religious rituals, and soda has replaced locally produced drinks or water as the primary source of hydration, as one interviewee mentioned:

When you go to small indigenous communities, you can see soda producers advertising everywhere, the sign with the name of the community has the logo of Coca-Cola on it [...]. Marketing has overtaken them [traditional foods], junk food and soda ads are everywhere [...], people want to drink what everybody else in the city drinks, that is, soda and sugary drinks. (CSM)

Some interviewees believed that Mexicans value soda more than other food commodities. People drink soda for all meals including breakfast, and it is considered an act of kindness to offer visitors a glass of soda. As a government official pointed out:

In some areas, people value Coca-Cola more than food; they buy 2.5 litres and some chips, instead of any other thing. They would rather buy that than beans. (LEG)

Although this argument could be seen as a stigmatized framing of the behaviour among low income populations, it exemplifies how a set of values is assigned to sodas. This finding also concurs with previous research on this topic, which indicates that people drink soda regardless of whether it is recognised as a drink which is bad for the health of adults and children (Theodore et al., 2011). In some circumstances such as smoking, decisions about a type of behaviour are guided only by the perceived short-term benefits, without taking into account the damage to health that this decision can cause in the long term (Lujic, Reuter, & Netter, 2005). This is also seen in the meaning of drinking soda, which has gone beyond rationalising its consumption as an unhealthy drink. Drinking soda has an emotional value, and this can be compared with the arguments that have been made about the cultural and emotional value attached by some to smoking cigarettes (Ashton & Golding, 1989; Dallman, 2010). Beliefs about soda being a symbol of belonging, of status and of satisfaction emerged in the interviews. As an academic mentioned:

[The reasoning is if] I don't have any other means to have joy in my own home, I use food or [sugary] beverages to fulfil this lack of

satisfaction [...]. [Soda is] much safer than alcohol [...], and it is safer than tobacco [...]. This behaviour is likely to be a result of an addiction.
(ACA)

Furthermore, the shift from consuming traditional drinks to consuming industrialized sugary drinks and sodas has been framed as a personal preference, as a way 'to belong to this world' (CSO interviewee) and as a result of exposure to soda producers' marketing strategies (CSO interviewee). In some cases, it has also been framed as a result of soda producers' expansion into areas where they have government concessions to use and exploit water springs regardless of local communities' opposition, as in the case of Chiapas State (Merbert, 2015, p. 175). The presence of the company in poor communities was framed as an opportunity for local people to gain employment and improve the economy of the state (Coca-Cola Foundation, 2014b), and not as a factor that shifted the availability of drinks and affected choices. Some academics mentioned that local presence of the brand, local marketing and local involvement in SRA is a way to use a frame for strategic marketing (Merbert, 2015, p. 175).

The 'happiness' frame: filling the void

Food and beverage producers producing soda are aware of the cultural meaning these beverages have in Mexico. Therefore, their marketing strategies are related to the emotional side of people rather than pointing out its nutritional values. Some examples include the Coca-Cola Foundation's 'Skipping to Happiness Program 2016' (Coca-Cola FEMSA, 2015a) in Mexico, and the 'A Little Happiness Every Day' and 'Open Happiness' worldwide campaigns (Taylor, 2016). Emphasizing feelings and happiness to position their product was the frame picked by the F&BI to reach a population that was increasingly aware of the obesity problem. Some of the strategies were used nationally by the F&BI to influence the policy debate, as described in Chapter 8.

III. Framing the solution of the policy problem

How to tackle obesity has been an ongoing debate worldwide for more than two decades (Cecchini & Sassi, 2012; WHO, 1990, 2003, 2007a, 2013b). Different

approaches to tackle obesity have been debated, such as improving diets, improving access and availability of foods and improved public spaces for increasing activity, as explained in Chapter 2. The solution for the 'obesity problem' was framed as being either a personal matter or a collective one. However, the solution for the 'soda consumption' problem was additionally framed as being a 'difficult' or 'unfair' one, since it intervened only in respect of one product. This debate mirrors public health literature where polls and suggestions include dietary interventions (Sassi et al., 2012), nutrition education (Beeken & Wardle, 2013), interference of media in health habits (Boyce, 2007) and change in prices of single products (Powell & Chaloupka, 2009) as the solutions. Each of these frames is explained below.

Regardless of the solution being a personal or political matter, the solution to the obesity problem was framed as being 'difficult' (Rivera-Dommarco et al., 2013, p. 11). The 'difficulty' frame was identified as a barrier to public actions, and actors regardless of their backgrounds repeatedly mentioned it. For example, the ANM mentioned:

It is very difficult for people to modify their eating patterns, especially with respect to products such as sugar, where there is a tendency of humans to like it. This is especially true in Mexico where we spoil our children. From a very young age, they consume sugary drinks, and they no longer like simple water. (ACA)

The perception of the problem being 'difficult' to solve is related to other assumptions about the problem, namely, the multi-causality of the disease, as discussed in Section II. This 'multi-causality' framing has been one of the driving arguments to oppose the soda tax as a solution. These findings concur with research dating from 2000 and before (Nestle & Jacobson, 2000) in which solutions kept focusing on changing the behaviour of individuals, an approach that, as the authors describe it, 'has proven woefully inadequate, as indicated by the rising rates of both conditions' (Nestle & Jacobson, 2000). The argumentation follows that it is better than doing nothing about it because it is 'difficult' or to start making some changes to the environment (Stuckler & Nestle, 2012), as discussed in the following section.

Individual versus collective solutions

Arguments about changing personal choices and lifestyles as a solution (CONMEXICO, 2013; EPC, 2011b; Radio Forumla, 2013) contrast with views on obesity as a structural problem concerning the State and in need of policies for changing the environment and for using legal interventions (Charvel S, 2012; Encarnación, 2015; EPC, 2011b). Actors interviewed, such as advertisers, activists and think tank members, framed solutions as a matter for the individual, particularly for those suffering from obesity or diabetes. As a member of the media pointed out:

Each individual is responsible for their own behaviour and attitudes, and therefore, I think that the people have to take some actions and consume a healthier diet. (MIM)

Framing the obesity solution as being the responsibility of individuals is mainly an argument given by actors whose main interests are to promote food and drinks for commercial gain. They tend to influence debates when regulations are up for consideration, when such regulations might damage their primary interests (Hawkins & Holden, 2013b), as in the case of alcohol (Hawkins & McCambridge, 2014) or tobacco (Cairney et al., 2012) regulations. As described in Chapter 2, Mexico is a major consumer of snacks and sodas, and therefore any intervention strongly affecting demand is perceived as a threat to the soda industry (US SEC, 2013). Therefore, resistance to the policy was expected from the F&BI, and framing the problem as a personal matter was a means to resist policy change, as has been described in the literature (Brownell & Warner, 2009; Nestle & Jacobson, 2000).

In contrast, actors familiar with the evidence on obesity as a health problem framed the solution as a matter of public concern. For example, the ANM's academic publication considered the problem to be a matter of protecting human rights. It stated that public policies for 'improving health' were a part of attending to human rights and 'are much needed in the country' (Rivera-Dommarco et al., 2013, p. 10); they were supported by CSO organisations when promoting their 'Manifiesto por la Salud Alimentaria' (Alianza por la Salud Alimentaria, 2012b).

Attributing obesity to a single product: soda

A discrepancy in the frames around the causes of obesity was mainly the contrast between singling out one commodity versus the overall energy consumption of food. For example, while academics and civil society groups insisted on pointing out the negative effects of soda and sugary drinks on health, others dismissed it. An actor from the industry mentioned 'demonizing one thing [soda] is not good for anything'. He was supported by a civil society member who said 'everything you eat or drink excessively will affect negatively your health. [...] soda, water, anything'.

Opposing arguments against an intervention in a single product (soda) emerged in the data. For industry and media actors, the soda tax was overvalued as a solution to the obesity problem. The CONCAMIN industry consortium press release mentioned:

Besides not having a real impact on reducing obesity, it [the soda tax] has negative effects to society: taxes on foods and beverages result in increased revenue but do not improve the habits and behaviour of consumers. (CONCAMIN, 2015)

This frame was largely contested by academics and civil society members. They repeatedly highlighted the relevance of soda and sugary drinks as being part of the problem, and they emphasized that doing something about it was the key to solving the obesity problem. This was expressed by civil society groups (see Chapter 8) and highlighted in the academics' ANM report:

Soda is not healthy, and its consumption is very well accepted and rooted in Mexican society. However, its consumption is linked to an increased risk of overweight, obesity, diabetes and CVD. This is why, amongst other recommendations to reduce its intake, a soda tax is recommended. (Juan Rivera et al., 2012, p. 3)

Consequently, these arguments opened an opportunity to frame the soda tax as a solution to overcome the obesity and diabetes problems, as discussed in literature (Dorfman, Wallack, & Woodruff, 2005; Smith et al., 2016). The cornerstone

arguments used to push for the soda tax were considered to be (a) the current epidemiology data on obesity, (b) data on sugary drinks' consumption and its relation to obesity; and (c) the public health advocacy arguments about the need for solutions. As a member of a think tank mentioned:

We had the perfect excuse: we are the country which consumes the most soda in the world, we have the data [on the obesity epidemic], [we had] the moment of [a fiscal reform coming], and [...] we have the IEPS [special taxes on products and services] applied to products having negative externalities. (TTM)

Therefore, having recognised obesity as a problem and having a political solution to it, the next step was to frame it as a collective effort. An important frame adding strength to the solution was how the new government promoted itself as an inclusive government, where all actors should participate. The following section discusses the positive and negative beliefs and frames about this approach.

Multi-stakeholder approach

One of the main frames about policies to tackle obesity was to have a multi-stakeholder approach. In this thesis, a multi-stakeholder approach is defined as 'a governance structure that seeks to bring stakeholders [actors] together to participate in the dialogue, decision-making and implementation of solutions to common problems or goals' (Council of Europe, 2016; Fuchs, Kalfagianni, & Havinga, 2011). However, no clear views were expressed, neither by informants nor in the documents, to suggest how such recommendations are to be implemented or operationalised (Pratt, Charvel Orozco, Hernandez-Avila, Reis, & Sarmiento, 2014; Rivera-Dommarco et al., 2013; SSA, 2011).

The multi-stakeholder approach to tackle the obesity epidemic was framed both as a positive and negative approach. Viewed positively, actors mentioned that the multi-stakeholder arrangement provides a space to influence and improve collaboration of non-state actors with policy-makers, regardless of the power imbalances among them. For example, a legal document explaining how to operationalise the policy of obesity mentions:

[Considering] that the Health Sector Program 2013-2018 has as one of its objectives to consolidate actions for disease prevention and health promotion [in order] to promote healthy attitudes and behaviours, it is necessary to promote participation of the public, social and private sectors to have an impact on the social determinants of health. (DOF, 2014, p. 1)

In contrast, academic members framed multi-stakeholder arrangements as potentially negative, if they were not established under clear principles and rules to outweigh the competing interests of actors. As one academic mentioned:

The political weight that the industry has in policy decisions is high. The Ministry of Health leading the process allowed the [F&BI] influence to be high [...]. I believe that when the industry is part of the process, it loses credibility. Obviously I believe that communication with the industry is necessary, and their opinion has to be heard, but it is very different [when instead, you only] hear their opinion and then a group of experts make the decisions. (ACA)

Multi-stakeholder arrangements were also framed as arrangements that 'have been shown to serve the private sector interests' (CSO), as they tend to have the most power and close relationships with policy makers amongst all non-state actors (Farnsworth & Holden, 2006; Fuchs et al., 2011; Ken, 2014). As noted by an interviewee from an international organisation:

It seems like a joke having more representatives of the industry at the discussions than you have experts on nutrition and from the civil society groups at these workshops [workshops to set nutritional criteria for the ENCSOP]. They are deciding the rules. (IAM)

Furthermore, while multi-stakeholder arrangements were highlighted as a platform that may or may not have potentially positive outcomes, the role of non-state actors or independent entities under such arrangements were also portrayed differently

depending on the informant. Civil society members saw themselves as suddenly having a powerful position in food policy-making (Nestle & Rosenberg, 2015). But they also framed the F&BI's discursive power throughout the process (EPC, 2015), as has been the case in the policy sphere worldwide through the years (Clapp & Fuchs, 2009, pp. 93-95).

It is important to consider the power of the F&BI, and how the outcome of the policy, as a fiscal measure, was what the F&BI wanted least. However, as covered in Chapter 8, remediation actions were taken to avoid the full impact of the soda tax, and therefore the F&BI showed that they were able to maintain a powerful position throughout the policy process. For instance, they had a place in the monitoring strategy (OMENT), as described in Chapter 7, and they initiated several PPPs that benefited their own interests, as noted in Chapter 8. Also, framing the F&BI's power was an important factor in the soda tax debate since it helped to engage the opposition to build a network, and also encouraged the government to avoid being perceived as complying with the F&BI demands.

The government's framing of the multi-stakeholder approach was highlighted in official state documents. It did not consider potential sources of conflict but assumed a natural, positive and inclusive arrangement; an imbalance of power among the participants was not considered. This is relevant to understanding the process described in Chapter 7.

In addition to the multi-stakeholder approach frame, the use of evidence for policy design and implementation is a common argument used among actors. The next section provides details about how actors framed evidence to either support or oppose the fiscal measure.

IV. Framing the evidence for the soda tax

The use of evidence to support a problem or issue to get on the agenda was a recurring frame among interviewees and in documents. It is important to mention the difference between the frame used to refer to the availability of evidence for a particular problem and the frame of how the evidence was used, regardless of any limits or flaws (in the views of some, as explained ahead). The results show that some actors recognised the unprecedented emergence of evidence between 2009-2013 related to SSB consumption and obesity as the cornerstone for fostering political change, as described in Chapter 4.

The use of evidence for public health policy is itself a broad topic that is widely discussed among academics and goes beyond the scope of this research. However, it is important to highlight how 'evidence' is framed either to support or to contest this policy, as it played a prominent part in the media to position the topic in the policy agenda. As described in this section, for this case study, evidence was (a) recognised as being widely available, (b) perceived as being necessary for a policy change, and (c) framed differently by different actors to shape public opinion or seek support for their arguments (in this case, for or against the soda tax).

Availability of evidence

According to the MoF they used the available evidence to design the Fiscal Reform, and think tank members noted that there was a lot of information on the benefits of taxing sodas, which was provided to the policy makers. Academics also mentioned they wanted evidence, and it was provided to them. As an academic mentioned:

What we needed is to base our decision on the best available evidence [...] we [academics supporting the tax] have very solid and internationally recognized experts. (ACA)

A think tank member confirmed that 'in the arguments used, there is a lot, I mean a lot of evidence' (TTM). However, according to other civil society informants, the actors who were involved in promoting the soda tax and continued to push for other

topics 'needed to have fresher arguments' (CSM) or to frame the evidence differently. As an academic recognised, evidence is not always used:

The evidence is not necessarily part of the political battle, [but sometimes] it feeds arguments, which favour or criticise specific positions on certain topic. (ACA)

Furthermore, it was important to understand who the actors providing the evidence were. As mentioned in a BP report, academics and international agencies provided evidence to make the case (Donaldson, 2015). However, evidence was also generated and provided to politicians by the F&BI, as explained by an interviewee:

We [the food and beverage industry] provided information and scientific evidence about the situation of the Mexican population, but we did not influence the policy decision. (F&BIM)

Some interviewees referred to international and academic studies conducted and supported by independent scientific groups, whereas others (including an F&BI representative) highlighted their own evidence. This becomes a matter of concern when there is deliberate misinformation to undermine or question the qualifications of some actors producing the evidence, as well as concerns about the source of funding when producing evidence for policy-making (Black, 2001).

Use of evidence to challenge soda tax

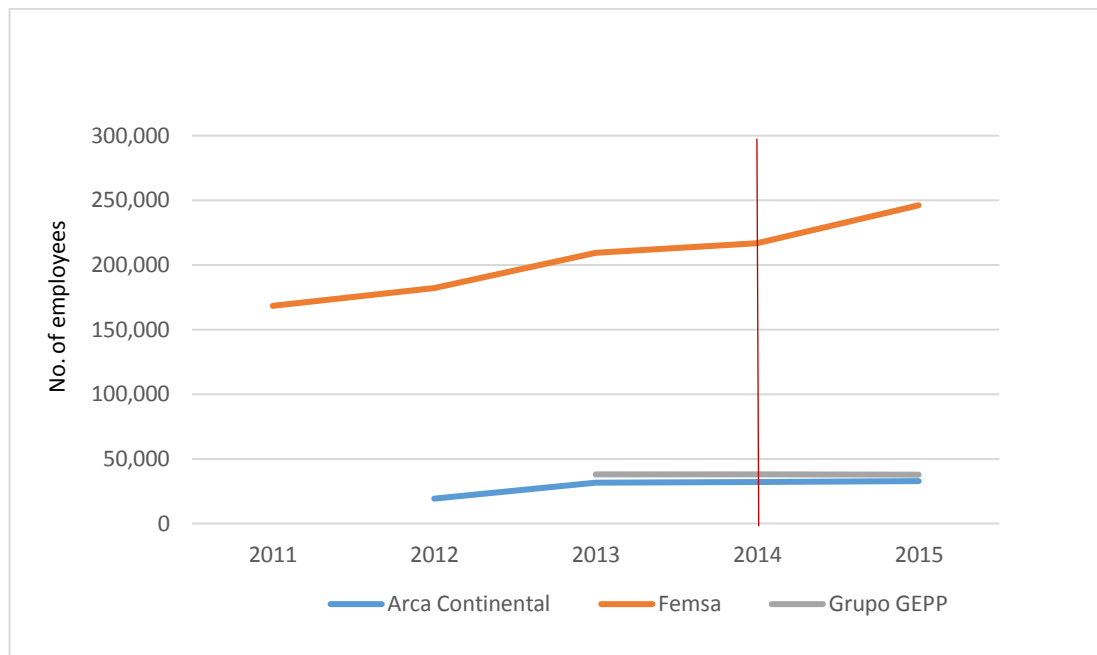
The following section analyses how evidence was used to challenge the soda tax. An examination of how facts contradict each other depending on how they were framed is also presented. This discussion focuses on how arguments based on certain sources were publicly used to gain credibility and to challenge the soda tax. The frames deployed around the evidence helped to sustain certain actions taken by the actors involved in the policy formulation and the implementation of the tax (Chapters 7 and 8).

Economic implications of the soda tax and a threat to jobs

Frames around the economic implications of the soda tax were used to negatively frame the policy measure. The F&BI constantly issued press releases and engaged the press to express these thoughts (CONMEXICO, 2013). These frames were also used by newspapers and journalists. For example, Sergio Sarmiento, a well-known journalist, presented arguments against the soda tax in his 'Jaque Mate' editorial published in several newspapers, such as 'The levy hit some producers and their workers as well as formal traders, but allowed a 51.7% increase in government income from excise tax' (Sarmiento, 2013). The main frames used to discourage the soda tax were the implications for jobs, soda producers and the poor.

One of the main arguments against the soda tax was the implications it might have on employment. As a specialist from the Universidad Autónoma de Nuevo León (UNAL) pointed out in a press conference, the soda tax allegedly created problems such as decreases in employment and production (Chapa-Cantú et al., 2015). A press release in 2016 by the ANPRAC agreed with this claim and estimated that the gross production 'fell by six thousand 500 million pesos, 0.04 percent of GDP and generated 10,000 job losses' (ANPRAC). Although this frame was sustained throughout the policy process, data analysed from soda producer's annual reports showed that soda producers did not lose any employees. As shown in Figure 6.2, the three main soda producers in the country not only maintained but increased the number of employees (Arca Continental, 2014b; Coca-Cola Femsas, 2015b; Cultiva, 2015).

Figure 6.2 Mexican employees per year of three main soda bottlers



Arguments about implications for jobs and growth of the company were not consistent with the frames used by industry actors. However, they disclose a contradictory argument used by the Universidad de Nuevo Leon and ANPRAC, as explained in Chapter 5. They also disclose the close relationship of this university to the F&BI and the powerful position of soda industries in the economic and political agenda of the country.

Implications for Mexico's economy and soda production

In addition to the 'impact on jobs', the F&BI also used the 'negative impact on [soda] production chains' to oppose the soda tax (Valverde, 2016, p. 1). This frame was supported in a report funded by the F&BI, revealing the sector's preoccupation with the implications of the soda tax for their business and, in turn, the impact on the economy:

Changes to the soda industry in Mexico are important, as it has implications for the national economy and for other sectors. The change affects the poor most, so we say that they are regressive taxes. (Aguilar et al., 2015, p. 18)

This frame was contested by academics who reported that the growth rate of soft drinks for 2007-2014 was 1.9 % [and] that predictions for the next four years (2015-

2018) showed that the industry would grow at a compound annual rate of 1% (Batis, Rivera, Popkin, & Taillie, 2016). In addition, some actors who supported the soda producer's interests, such as UNAL, framed soda producers as a cornerstone of the Mexican economy:

Soda producers in Mexico represent 12.25% of the food, beverage and tobacco producers and 2.39% of the entire manufacturing industry, producing 124 million dollars per year, equivalent to 4.1% of Mexico's GDP. (Chapa-Cantú et al., 2015, p. 5)

Mergers and acquisitions with small businesses were one of the possible explanations for maintaining and increasing growth (and jobs). Regardless of framing the soda tax as having a negative impact on manufacturers, reports showed that production of sugary drinks was actually decreasing, and such forecasts considered that no further tax changes would directly affect the soft drinks market, as the growth of products marked as light is estimated to reach 6.3% in 2 years (Batis et al., 2016).

The negative effects soda tax has on jobs and on the county's economy were promoted strongly in press releases and industry documents. Interestingly, during a similar situation at the time of the Fiscal Reform in 2010 which also had implications for the industry, these frames were not used. This was stressed to investors in a 2012 corporate document:

In Mexico, a general tax reform became effective on 1 January of 2010, under which, as applicable to us, there was a temporary increase in the income tax rate from 28% to 30% from 2010 through 2012. Pursuant to an amendment made at the end of 2012, the 30% income tax rate will continue to apply through 2013. In addition, the value-added tax ['VAT'] rate in Mexico increased in 2010 from 15% to 16%. (US SEC, 2012)

The different approach taken by the F&BI in a similar situation indicates that framing the soda tax as a 'health tax' was the main concern of the fiscal measure.

The soda tax clearly had implications for the internal processes of soda producers, but it did not necessarily affect them negatively overall. However, the framing of their products as being penalized for not being healthy was the overarching concern affecting their business.

Soda tax's negative impact on the poor

The impact of the soda tax on poor populations was one of the main arguments used to oppose the soda tax in industry-sponsored reports and in some actors' websites at the end of 2015:

On average, families with low income spend 2.7% of their budget on buying non-alcoholic beverages, while people with higher income spend 1.1%. (Cantú, Curiel, & Valero, 2015, p. 21)

Furthermore, the CONCAMIN report called the soda tax regressive (CONCAMIN, 2015), and the ANPRAC noted that the soda tax affected 63.7% of low-income households and that the poorest households paid 37.5% of the total tax (ANPRAC). This was countered by promoters of the soda tax with evidence, presented by scholars at several academic events, that obesity is regressive, as the poorest sectors of the country were the most affected by obesity (Colchero, Popkin, Rivera, & Ng, 2016).

Soda as 'necessary good'

In economic terms, soda was framed as a 'necessary good' or 'normal good' (Aguilar et al., 2015, p. 3). A 'necessary good' is one whose demand increases as income increases but not in the same proportion as income (Business dictionary, 216). This was used to frame the soda tax negatively by highlighting the fact that it affects the poor more than it does other groups. The observed decrease in money spent on soda was simply attributed to a moderate change in income increase. A think tank member supported this view on the decrease in soda consumption:

There have been changes because people have reduced soda consumption, but if they are changing expenses on cleaning products,

toothpaste, soap, [this expenditure] is alarming because the impact on the poor people is outrageous. (TTM)

In responding to these concerns, the Fiscal Reform framed the soda tax as taking account of the possible effects on the poor, mainly by avoiding the generalisation of value added tax (VAT) to food and medicine and only restricting it to soda and snacks (Initiatia de Ley de Ingresos de la Federación para el Ejercicio Fiscal de, 2014). The framing used in the government document justifies the measure as a direct answer to the F&BI's concerns, and it confirms that the initial intention was to tax all food (as was also expressed by an interviewee, as noted in Chapter 7). In addition to framing the soda tax as having negative social and economic implications, frames used to discourage the adoption of the soda tax included the lack of effectiveness of the measure, as explained below.

Soda tax as an ineffective or negative policy measure

The effectiveness of the soda tax was highly discussed in the media after the publication of three reports by ITAM, UNAL and INSP (Aguilar et al., 2015; Chapa-Cantú et al., 2015; Colchero et al., 2016). Contradictory arguments were found in these reports in terms of three factors. The first was the source of funding for the analysis. The second was the unit used to measure the effect and the databases used. The third was how the information was framed, and whether it led to a negative or positive perception of the effect or non-effect of the soda tax.

ITAM's report was funded by ANPRAC and CONMEXICO. None of the economists who analysed the information were involved in the policy debate before this report was published, and therefore, the topic was novel to their practice. As a result, no particular alienation to a particular position is assumed. It used 'caloric intake' as an outcome measure, as reported in a publication by another university specialized in public policy:

The report of CONMEXICO and ANPRAC with ITAM concludes that the tax did not reduce caloric intake in a significant way. It only reduced 6 kcal of the 3,200 calories consumed daily by Mexicans. (Ramirez, 2016)

For CONMEXICO, this report was enough proof to demonstrate ‘that demand of taxed beverage and foods is inelastic’ (Ramirez, 2016). This argument was taken to the media and was discussed in other publications, the report also mentioned that the estimated decrease in sugary drinks was between 6.5% and 7%. The report admitted that the soda tax had incentivized consumers to reduce consumption, though it framed this as ‘moderately reduced consumption’ (Aguilar et al., 2015). It was further noted:

These decreases in purchased litres of sugary drinks may not change the total calorie consumption if consumers substitute other foods or drinks. (Aguilar et al., 2015, p. 17)

Additionally, this report stratifies results according to the body mass index (BMI) of heads of families, and it also uses it as an outcome measurement. This is a misleading measure, as BMI changes after population-level interventions are not perceived immediately but in the mid-to-long term (Barrientos, 2013). The main conclusion is to include policy measures other than just the soda tax:

If the state wants to contribute, they can do other things, such as campaigns that make exercise attractive and healthy diets [...], have water fountains, places to exercise [...], sell seeds in Diconsa, have home gardens [...], favour dietary sodas [...], talk to food producers to reduce the amount of sugar. (Zaid, 2013, p. 1)

UNAL’s report noted that sales decreased by 3%-4%. However, it mentioned an increase in soda production from 1200 to 1400 million litres monthly (+16%), in bottled water from 400 to 500 million litres (+25%), and in juice from 30 million to 75 million litres (+150%) (UNAL, 2015) and gave a negative connotation:

Reduction in consumption was estimated at 3%. Therefore, the tax did not substantially change the median caloric intake of Mexicans (if so, it reduced calorie consumption by 0.215) but importantly, it increased the fiscal revenue. (Chapa-Cantú et al., 2015)

Finally, the INSP report mentioned that sales of taxed beverages decreased by 6% (-12 ml/capita/day) and the rate of decrease in sales was up to 12% in December 2014 (up to 17% in LSE houses). It also mentioned a 4% decrease in untaxed beverages (36 mL/capita/day) higher than the counterfactual (mainly by bottled water) (Colchero et al., 2016, p. 1). This report was funded by Bloomberg Philanthropies with the outcome variable with respect to sodas purchased; it used Euromonitor International data and was prepared by supporters of the soda tax.

This same report mentioned that economic models of addiction and related behavioural models imply that the long-term impact of a price change will be much larger than the short-term effect (Colchero et al., 2015), and it gave a positive connotation of the soda tax results. Figure 6.3 shows the evidence presented in the above reports after the tax was implemented. These frames were used to gain support with legislators for and against the soda tax during Congress' voting sessions on the fiscal policies for 2015-2016.

Figure 6.3 Framing soda tax impact according to report's institutional support

INSP*	UNAL*	ITAM*
<p>➤ Sales of taxed beverages decreased in 6% (-12ml/capita/day) the rate of decreased in sales was put up to 12% in December 2014 (up to 17% in low-income families).¹</p> <p>➤ 4% decreased in untaxed beverages (36 mL/capita/day) higher than the counterfactual (mainly by bottled water).¹</p>	<p>➤ Reduce in consumption was estimated in 3%.²</p> <p>➤ Therefore the tax did not change substantially the median caloric intake of Mexican (if so, it reduced calorie consumption in 0.215) but increased importantly the fiscal revenue.²</p>	<p>➤ Although the price of calories increased by 4% the quality of calories consumed decreased 1% only.³</p> <p>➤ The elasticity of calories in -0.3 [...] although these "low" elasticity limit the power of taxes to decrease obesity, they imply high tax collection potential.³</p> <p>➤ The estimated change in price ranges form 12-14%.³</p>

* INSP- National Institute of Public health, UNAL- national Autonomous University of Nuevo León, ITAM- Mexico's Autonomous Institute of Technology)

1. COLCHERO, M. A., SALGADO, J. C., UNAR-MUNGUÍA, M., MOLINA, M., NG, S. & RIVERA-DOMMARCO, J. A. 2015. Changes in Prices After an Excise Tax to Sweetened Sugar Beverages Was Implemented in Mexico: Evidence from Urban Areas. *PloS one*, 10, e0144408
2. AGUILAR, A., GUTIERREZ, E. & SEIRA, E. 2015. Taxing Calories in Mexico (Preliminary and incomplete Draft). México.
3. CANTÚ, J. C., CURIEL, D. F. & VALERO, L. Z. 2015. La industria de las bebidas no alcohólicas en México.

V. Framing motivations for the soda tax

Based on the socio-political conditions in Mexico, explained in Chapter 4, beliefs about the underlying driving forces behind the soda tax policy were framed in two ways. Some interviewees viewed the soda tax as a government initiative to secure government spending, while others saw it as a ‘window of opportunity’ where several factors merged, including pressure from civil society.

Securing funds for public spending

As the leader of a new administration, Enrique Peña Nieto sought to increase government funds by increasing public revenue. This was not framed as a popular alternative, as one member of a think tank mentioned:

Naturally, new governments implement reforms, and the first thing they do is to increase taxes. Increasing taxes as soon as you take office is not as unpopular as if you increase taxes during an election, so this was a good moment to do so. (CSM)

According to the civil society members interviewed, while running for president, Peña Nieto had intentions of taxing all foods, drinks and medicines, but that was very difficult because it would generate strong social opposition (CSM interviewee account). According to a think tank member, and to some members of the media, Peña Nieto would exacerbate the general disapproval he faced among the liberals sympathisers supporting the defeated candidate of Partido de la Revolución Democrática (PRD) (Crumpacker, 2013). The soda tax came with potential political costs, therefore, it had to be carefully framed to the public as a positive measure to overcome the negative externalities it might imply. As some informants noted, it was a good time to raise taxes as a new administration was taking office. For example, an international interviewee pointed out:

Last year, we had something we did not have in 2006, a new administration that fortunately recognized obesity is a problem and taxing soda was a possibility [...]. It [the soda tax] gained support from the President's party. (IAM)

Increasing the price on soda was a good opportunity to generate revenue and was framed it as a positive measure. However, one MoH did not frame the soda tax as a public health strategy, as might be expected from a health authority. Instead, he showed little involvement in the fiscal measure and stated that 'you have to ask 'Hacienda' [the Ministry of Finance]', explaining that the main aim of the soda tax was to collect money. An academic agreed with this point and highlighted the lack of support from the MoH for this policy as a statement to their position:

[The] Ministry of Health didn't support the tax actively at the beginning. Their position was: It is the Ministry of Finance's topic, not ours. This is weird because, obviously, it was a health tax. (ACA)

Soda tax as the result as a combination of factors

The sodas tax was also framed as a result of a combination of several factors creating a policy 'window of opportunity'. This included many policies proposed by the legislators, the support of CSO, and strong technical support (MoH account). These beliefs reflect some of the theoretical proposal of Kingdon's multiple streams theory on agenda setting (Kingdon, 1995; Silke & Kriesi, 2007, p. 129). The account of a civil society member supports this finding:

Well, it has much to do with the moment we were going through; a new government was taking office. Usually when [a new] governments arrives, the first thing they do is reform and generally increase taxes because politically it has not such an impact as if they do it when leaving, or when you have an election involved. [It also had to do with] now being a [right] time and situation allowing it [the soda tax] to happen, because it was something they had tried in other countries [too]. (CSM)

Regardless of the motivation of the soda tax, the respondents unanimously agreed the government transition and the advocacy groups' actions were relevant factors for the soda tax getting on the agenda. These findings reflect the theory of agenda setting developed by Kingdon, where policy (the soda tax), politics (government

transition), and the problem (obesity/soda consumption) merge to create a policy window (Kingdon, 1995).

VI. Summary

This chapter explains how actors framed and perceived the cultural and political factors in Mexico at the time the soda tax was discussed as a policy alternative as well as immediately after it was implemented. It describes how actors framed the obesity and soda consumption problem and how it was not necessarily considered a problem to be addressed only by the government.

For this policy, the framing of the problem was strongly influenced by how the evidence surrounding the risk factors of either obesity or the soda tax were presented by different actors including academics, civil society and F&BI representatives. Additionally, the recognition of a 'problem' of 'high' consumption of sugary drinks was framed as culturally significant for Mexicans, as stressed in previous publications (Théodore, Bonvecchio Arenas, Blanco García, & Carreto Rivera, 2011; Theodore et al., 2011), and which was strongly influenced by the excessive marketing and expanded distribution of sodas. In addition, this perception is related to normative beliefs about the quality of water used for soda production, sodas as a reward and soda consumption as an addiction.

In addition, the positive framing the process as a multi-stakeholder approach to obesity does not consider the potential conflicting problems arising from such an arrangement (Helmig, Spraul, & Ingenhoff, 2016). The tax was not only framed as a positive factor for health and health programs, but also as a positive solution to increase income to execute such programs. Its potential effect on the poor and the country's economy were the main arguments used to frame it as a negative policy option, similar to the cases of tobacco and alcohol policy issues, to gain support against the soda tax (Hawkins & McCambridge, 2014; McCambridge, Hawkins, & Holden, 2013; Mialon et al., 2015; Scholes, Johnson, & Whittington, 2002). Finally, after the soda tax was implemented, some academics who were proponents of the tax produced evidence to highlight its positive effects, whereas opponents produced evidence of its 'small' effect.

Chapter 7. Policy development and the roles of state and non-state actors

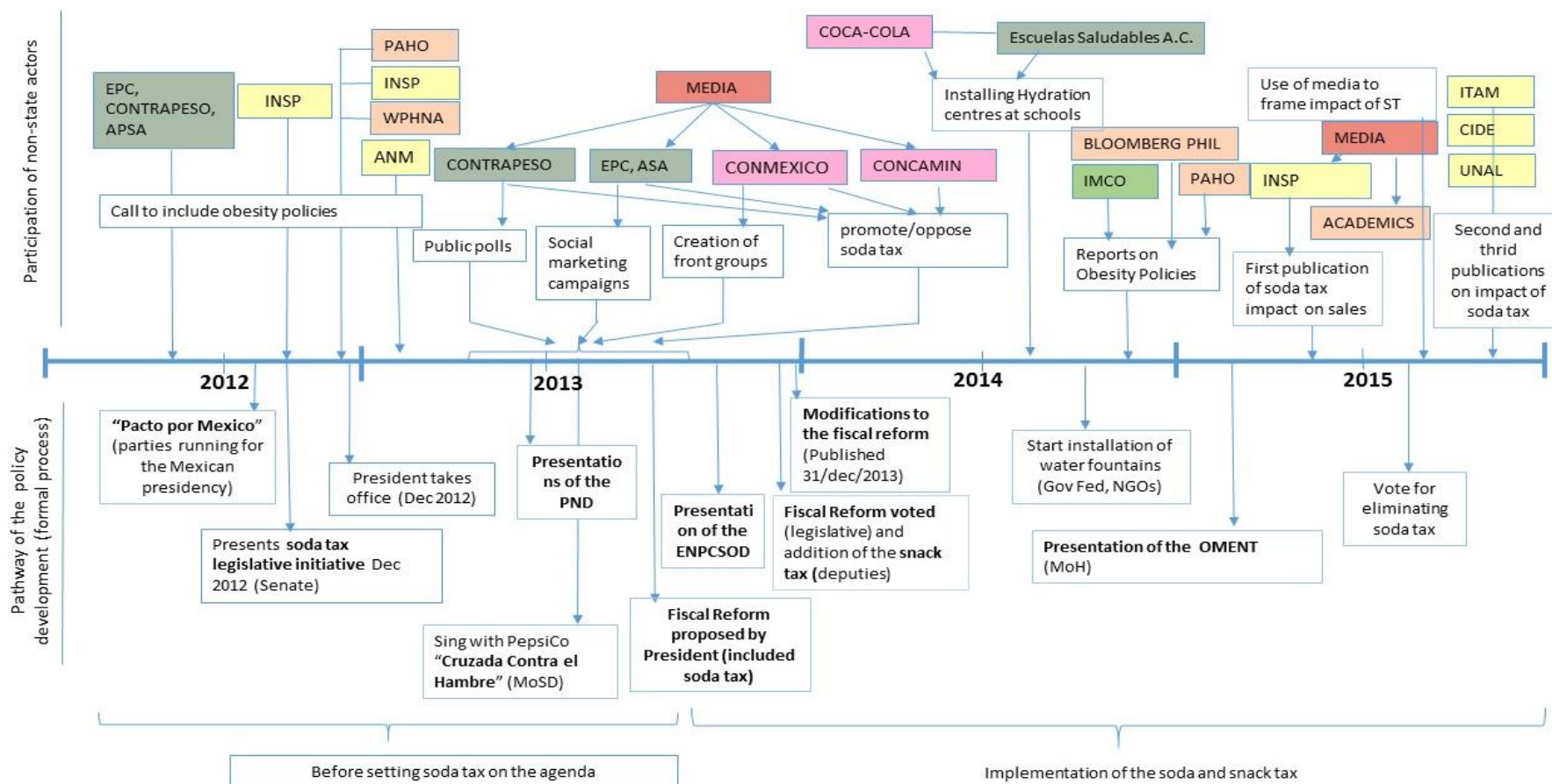
I. Introduction

This chapter describes and analyses the process of the policy design and agenda setting of the soda tax. It reflects upon findings from the interviews and policy documents supporting and outlining the soda tax; and explores the role of the state and non-state actors in the formal policy process.

First, the soda tax as a legislative initiative presented in December 2012 is analysed. Then, the Mexican National Development Plan (Plan Nacional de Desarrollo [PND]), which commenced in 2013 as the outline of the President's policy plan, is examined. Finally, the Ministry of Health's (MoH's) National Strategy to Control and Prevent Obesity, Overweight and Diabetes (ENPCSOD) and the Mexican Observatory of Non-Communicable Diseases (Observatorio Mexicano de Enfermedades No Transmisibles - OMENT) design processes are presented.

The above analyses follow the process shown in the lower part of the timeline in Figure 7.1. For the purpose of this thesis, the process is divided into formal policy development led by government officials; and informal policy development. Formal policy development refers to the process followed by state actors to formulate the policy content. Non-state actors may or may not be invited to participate in this process (Buse, 2008), which Kraak et al called 'contractual relationships' with state-actors (2012). Informal policy development refers to parallel actions that are not officially related to the formal process but that include the actions of non-state actors to influence the agenda setting and, in general, the policy process (Buse, 2008). This chapter analyses formal policy development and 'contractual' participation. Chapter 8 analyses informal policy development or systemic public agenda (Cobb & Elder, 1972) and how it shaped the policy.

Figure 7.1 Policy design implementation pathway and participation of non-state actors



II. Soda tax as a legislative initiative

The soda tax first became a legislative initiative in 2012. Senator Marcela Torres from National Action Plan (Partido Acción Nacional- PAN), the largest party opposing the President's party Democratic Revolution Party (Partido de la Revolución Democrática- PRD), submitted it to a vote. A member of an international agency said in an interview that 'the initiative was a result of [this] Senator working with the civil society and academics'. According to Kingdon's analytical framework, non-state influences or non-state policy entrepreneurs use agenda-setting opportunities (policy windows), such as the collaboration with the Senator, to include issues of interest on the policy agenda (Howlett et al., 2009, p. 103).

When this legislative initiative was submitted to a vote, other initiatives were also emerging in both legislative chambers. However, none of them included a fiscal measure. Thus, awareness of obesity as a public health issue was a clear concern in policy discussions within the legislative, and dialogue about the obesity problem was leading to a search for potential political solutions (Thomas, 2001). One legislator stated the following:

We [deputies of our party] made calls for actions, declarations, resolutions where we mentioned obesity as an important public health problem. (LEG)

Support of non-state actors in formulating soda tax initiative

Accounts consistently show that civil society and academia were part of the process of policy formulation of the soda tax initiative. Some civil society groups acknowledged that they participated in this process, mainly through three different strategies. First, they 'persuaded' the legislators to support the legislative initiative. Second, they brought together various actors, such as legislators and academics, and reached out to other civil society organisations, as described by a member of an international organisation:

The INSP, the group El Poder del Consumidor (a civil society organisation) and an advocacy group called Polithink that worked to set ideas with the Congress were working together since the beginning

of the year [2012]. Each group has different projects and works with different organisations. (IAM)

Third, they helped encourage the inclusion of evidence and academics' recommendations in the legislative initiative by working with several academic institutions and 'provided a lot of evidence and international experience' (IAM). Academics and international organisations were invited to formally advise the Senator Marcela Torres, and some months later (Figure 7.1) the Senate invited the Pan American Health Organization (PAHO) Mexican office to collaborate. One international organisation representative noted the following:

We received the invitation from the Senate to help in this initiative [the soda tax] and facilitate information available in the organisation, but [we] also were in frequent conversations with the MoH to share everything we were working on and the experience the Congress was having with this initiative. (IAM)

Subsequently, PAHO created a team of advisers that included several organisations, including the INSP, a MoH representative, other UN agencies such as FAO and UNICEF, Polithink and BP, to devise a strategy. In this regard, one interviewee said the following:

At least once a month, we were gathering to share what everyone was doing and defining strategies that could help consolidate the law initiative that the Congress would present to achieve approval of the majority. (IAM)

Legislators' positions in supporting and opposing the initiative

Other than Senator Marcela Torres's allies (other senators, Polithink, Fundación Mídete, Contra Peso ANSA), not many actors from the Senate participated in the formulation of the soda tax initiative. Other legislators and food and beverage industry (F&BI) representatives reacted to the proposal only later. First, several legislators from the proponent's party and the opposing party expressed divided opinions:

The coordinator of the chamber didn't want me to present it [legislative initiative], so I needed to impose by being accompanied with 24 other senators, 12 of my party and 12 of other parties [...]. (LEG)

A civil society member confirmed that the Senate chamber president, 'who is totally pro-industry', had decided to reduce the initially proposed soda tax of 20% and to not pass the legislative initiative. These accounts indicate the strong opposition inside the Senate chamber at that time. Additionally, and even though no formal accounts are available to verify lobbying efforts at legislative offices, one legislator mentioned that F&BI representatives visited all Senators who signed the legislative initiative. She also noted:

A Senator of my party represents the soda industry, and she radically opposed my legislative initiative. We even had personal problems inside our own party [...]. (TTM)

One interviewee described the F&BI lobbying as follows:

Immediately after presenting the initiative, I had visits from the soda industry people, with studies supported by them telling me that soda was a clean liquid, that it is a safe source of drinking water, that it is part of the poorest Mexicans' diet and that jobs would be threatened, as well as the whole economy in Mexico, that we would have problems with sugar cane producers, and all the little family stores would be affected because 80% of what they sell is soda. I argued against each of the arguments they gave me. (LEG)

Many legislators from other parties who opposed the soda tax remained silent. A think tank member noted that when the discussion started, the PRI legislators were silent on this aspect, and 'they did not pronounce themselves in favour or against the tax,' and it was mainly 'because the Fiscal Reform was coming' (TTM).

The widespread silence among the legislators of the new presidential party, Institutional Revolution Party (Partido de la Revolución Institucional- PRI), may have been due to a desire to 'close' the policy window opened by the PNA Senator's soda tax proposal. And before taking a stand for or against a policy proposed by the opposing party, legislators were waiting until the federal government first set out its agenda.

Although multiple obesity-prevention legislative proposals, including the soda tax, were presented to vote in 2012, none of them were passed in the Congress (both Senate and Deputies chambers), where the majority represented the elected President's party. Instead, all obesity issues were withheld until the new federal administration took office. This strategy would give the federal government a positive image as being proactive in dealing with obesity, as politicians choose policies that 'best promote their electoral appeal and gives more room for manoeuvre' (Majone, 1989, p. 76).

As mentioned in Kingdon's framework, policymaking refers to a condition of ambiguity and 'a state of having many ways of thinking about the same circumstances' (Feldman, 1991, p. 5), as illustrated in this case. Ambiguity creates stress and confusion (Zahariadis, 2014, p. 26). For instance, whether taxing soda was a health, political, financial or moral decision was kept ambiguous, given the context of the country. The interviewees considered the Senate an institution with internally conflicting missions (Marks & Thompson, 2011). Additionally, they also revealed how the F&BI engaged in persistent lobbying as a corporate political activity (Mialon et al., 2015, p. 519).

III. Formulation of National Development Plan

As soon as Enrique Peña Nieto took office, his team started to formulate the NDP, as described in Chapter 4. This plan's design had a multi-sectorial and multi-stakeholder approach. It included an internet-based public consultation, five national forums, seven special forums, forums in all 32 states and 122 workshops organised by each of the ministries of the executive power (Plan Nacional de Desarrollo, 2013). In this regard, a MoH member said the following:

The NDP was written by following two pathways, one through the public consultation directly with us, and the other was the internal proposal each ministry had. Each ministry's proposals should have undergone their own public consultation process. Our public consultation was either by meeting with us in our offices or by answering some close-ended questions on our website that anyone could do. (MoFM)

These accounts suggest that the approach taken was a collaborative one in which non-state actors were engaged (Kraak et al., 2012; VicHealth, 2016). Such collaboration is meant to be inclusive for 'enhancing the capacity of the participants for mutual benefit, and are meant to gain a common purpose' (VicHealth, 2016, p. 4). The federal government had opened the dialogue with non-state actors (Howlett et al., 2009, p. 111).

Public health advocates during the National Development Plan

The civil society groups who supported the soda tax were pressuring to put obesity topics on the agenda even before the new President took office and since then, they had economic and technical support from international organisations (as described in Chapter 5). Therefore, when referring to the National Development Plan, interviews reflected a sense of empowerment from civil society members or 'policy entrepreneurs'. As one civil society representative mentioned:

Civil society organisations, like us, [...] acted on the new administration's agenda [...]. They [the decision-makers] had no idea how to work, and that gave us the opportunity to include what we wanted. (CSM)

Civil society organisations representatives acknowledged their participation in the process, and most of their recommendations were considered. A civil society member noted the following:

Thanks to our participation [us and other CSO] during the meetings for the NDP, it finally included a strategy to control obesity, overweight, and diabetes. (CSM)

However, other interviewees noted that they were not invited for a workshop organized by COFERPIS):

When the National Plan meetings were organised, we denounced that we [the civil society] were not invited [particularly] to the meeting organised by COFEPRIS. (CSM)

The final content of National Development Plan

Despite the participation of non-state actors in formulating the NDP, the final document did not include specific policies (including the soda tax) to tackle obesity. Instead, in its final version, one of the NDP's aims was 'to put in place actions to prevent and control overweight, obesity, and diabetes' (Plan Nacional de Desarrollo, 2013, p. 117). According to the statements of Ministry of Finance (MoF) actors, the soda tax was not explicitly written into the NDP because it should be part of each ministry's documents. No record of discussing the inclusion of the soda tax in the NDP was found in public webpages of governmental agencies at the time of this research. Access to the National Institute of Transparency and Access to Information did not reveal such records either (Instituto Nacional de Transparencia, Acceso a la Información y Protección de Datos Personales [INAI]). Although the soda tax was not mentioned in the NDP, by highlighting obesity as a national problem, the MoF opened a window of opportunity for further work on the obesity agenda.

IV. The soda tax as part of wider fiscal reforms

It remains unclear how the soda tax became a part of the Fiscal Reform (Reforma Fiscal - RF) under the section of excise taxes (Impuesto Especial a Productos y Servicios - IEPS) (DOF, 20 November 2013). Contradictory accounts were found. First, two MoF members claimed to have worked hand-in-hand with the MoH:

We work with people from the Ministry of Health in all analyses, so we combined the creation of this tool [the soda tax] that would contribute to improving health but also to take advantage of the fiscal changes, and that's how we decided to include it. (MoFM)

Others claimed to have taken a participatory approach to include CSO comments on civil Fiscal Reform, which also included a snack tax:

We listened to everybody [...]. We received people from the academy, from the civil society, from the industry. (MoFM)

Furthermore, a civil society member described how they were surprised to see the soda and snack taxes as part of the Fiscal Reform (DOF, 20 November 2013):

Our surprise was that when the executive power presented the Fiscal Reform, they had taken our proposal [...]. They never told us openly they would include the soda and snack taxes. (CSO)

This final finding is consistent with another civil society actor's claim that after Peña Nieto took office, the government tried to design everything quickly without much consultation in order to avoid problems. MoH representatives mentioned that the soda tax was mainly prepared by the MoF. However, in contrast, a legislator claimed that the soda tax was adopted from the original legislative initiative (LXII/1PPO70/38519, 2012) submitted by the PAN in 2012:

One year after I presented the legislative proposal, the Minister of Finance came to see me and told me they were interested in my legislative initiative, including the soda tax and other fiscal measures, so they needed me to remove the legislative initiative for the President to propose it from the federal government. (LEG)

The previous claims reveal a discrepancy, as the MoF member's claim contradicts the claims of the MoH member, a legislator and a civil society member. The interviewees offered different accounts of how the soda tax was included in the

policy documents and incorporated into the federal policy agenda. Additionally, from interviewees' accounts, it was not clear how the final decision of taxing sodas at the rate of 1 MXP per litre was made, as the original legislative initiative suggested a 20% price increase. The Senator mentioned that she did not agree with this reduction:

I supported the MoF with the new federal soda tax proposal, but I did not agree how they presented it. I initially presented it as 20% per litre, and they [MoF] decreased it to 1.00 MXP per litre [...]. (LEG)

The interviewees speculated about the change being influenced by lobbying by the F&BI. One academic mentioned the following:

I have no doubt the industry played a very important in modifying or reducing the tax proposed with a persuasive role, especially the sugar cane industry, but it was also [a result of] corruption and influence on legislators [...]. (ACA)

Only the legislator who proposed the soda tax explained its transition from being a legislative proposal to becoming part of the Fiscal Reform; by contrast, the MoF did not describe any links with the Senator. The MoF's lack of transparency about adopting the Senator's legislative proposal indicates the relevance of the soda tax as being an idea conceived by executive power and the relevance given to it. Lehmann and Gilson (2013) noted that this is a type of 'power over others' (VeneKlasen & Miller, 2002) 'involving taking it from someone else, and using it to dominate and prevent others from gaining from it' (Lehmann & Gilson, 2013, p. 360).

V. The design of the MoH's National Strategy for Prevention and Control of Overweight, Obesity and Diabetes

While the soda tax was outlined in the RF, in parallel, it was also outlined in the ENPCSOD (Figure 7.1) and presented two months later. The MoH outlined this strategy, which, as explained in Chapter 1, includes several measures or 'pillars' to tackle obesity. One of them is the regulatory pillar that included the soda tax. The

government promoted ENPCSOD as a policy which included academic recommendations and the participation of non-state actors:

We called everyone who wanted to participate, at least from here [...] [the undersecretary of Health Promotion]. A list of very different people was involved in designing it [the National Strategy to Prevent Obesity]. (MoHM)

In contrast, one civil society member and another from an international agency stated that neither of them were allowed to participate even when they offered to review the proposal for comments:

No, we did not [participate in the National Strategy to Prevent Obesity and Overweight] [...]. [We] did not have the opportunity to review it before publishing it, [even though] we offered to work with them [on the draft], and they didn't accept it. (IAM)

Some actors were surprised that INSP academics were not invited to participate in the policy design, as they have 'international recognition' and were part of the academics generating evidence for changes in obesity policies. In contrast, a Senator from the President's party mentioned that the ENPCSOD was based on INSP reports. Nevertheless, he does not mention their active participation in the strategy:

Everything [for the ENPCSOD] was done through the under-secretary of Health; he based all the ideas on the INSP's work on Mexico's situation with obesity and overweight. Those [findings] guided us on what we have to do to reduce obesity and overweight. (LEG)

When talking about participation in the specific workshops of each pillar or component of the strategy with a representative of the MoH, he concluded the following:

I don't know the whole process [...]. Each regulatory pillar had its own coordinator. The regulatory pillar was organised by COFEPRIS, but the other two, well, we coordinated them. (MoHM)

However, this same MOH actor also claimed that the ENPCSOD and its content was their idea, and that other actors were trying to claim responsibility:

I designed the strategy ... well, the conceptual framework I designed it [...], but suddenly everyone claimed to be the expert on the topic of diabetes and obesity, and a lot of 'parents' of the strategy came publicly. Mm... like always. (MoHM)

This MOH actor's comments sends contradictory messages about participation and knowledge on the strategy. It reflects both the willingness to have some recognition and 'power over' (VeneKlasen & Miller, 2002) and credit for the policy. However, the interviewee account reflects no clear knowledge of the whole process. This might be a result of delegating the task to other policymakers to lead each pillar of the strategy. Even so, it is expected that the person claiming to be the author of the strategy should know and clearly understand each detail of the process. This account also contradicts the MoH's claims when replying about the soda tax:

You need to ask [about the soda tax] to 'Hacienda' [the Ministry of Finance]. (MoHM)

The contradictory messages about the inclusion of the soda tax as part of the regulatory pillar of the ENPCSOD supports the claim that the soda tax came as a fast executive order and that it was included in both the Fiscal Reform and the ENPCSOD without much discussion among government officials or the civil society, as some members of think tanks have claimed. However, members of the CSO claimed that the F&BI was involved in the ENPCSOD design, particularly in sessions discussing the food labelling and food marketing pillars of the strategy.

Legitimisation of the F&BI during the design of ENPCSOD

F&BI representatives were invited to participate during the design of ENPCSOD. A representative of the MoH confirmed their participation and justified it as 'necessary' as it is a 'legitimate' industry. Legitimisation of their involvement in policy processes is one of many corporate industry tactics used to influence the political agenda (Mialon et al., 2015). However, government officials differ in their opinions of which industries should be involved:

You cannot avoid the participation of the food industry [...]. It is like saying [the food and beverage] industry is the worst [...]. This is different from the tobacco industry: It has been demonstrated that a cigarette is harmful, while not all foods and beverages produced by the same company are harmful; a lot of them sell water. (MoHM)

MoH members clarified the F&BI's participation during the process and noted that the MOH played a leadership role in managing this participation.

[...] We did not negotiate with them [regarding the regulatory measures on the strategy]; we coordinated with them. Then [only we] will apply the law because we are the Mexican State and we have our responsibilities. (MoHM)

In this quote, the MOH actor did not mention any potential conflicts due to the F&BI's formal participation in the policy process. This is in contrast to other reports of F&BI participation (Mialon, Swinburn, Allender, et al., 2016; Nestle, 2013; Swinburn et al., 2015). This was consistent with another finding which compared the perception of the F&BI's role in policymaking with the role of the tobacco and alcohol industry's role in the 1980s and 1990s (Brownell & Warner, 2009; Warner, 2012). The normative beliefs on these accounts about the role of the F&BI expose a social construct which accepts their participation in policy design without questioning the possible risk of such participation to the policy. The concept of conflict of interest, defined in this study as 'a set of conditions in which professional judgement concerning a primary interest [...] be unduly influenced by a secondary interest [...]' (Thompson, 1993), is not considered. If this paradigm prevails among decision-

makers, companies' active role in policy design is not considered as conflicting. The F&BI whose products will be penalized by a soda tax, cannot 'judge and be judged', as an interviewed legislator phrased it. When it comes to regulatory measures, commercial interests and fiduciary commitments will always outweigh public health interests for private companies (Brody, 2011). This appears to have been completely underestimated and overlooked by the political informants in this study.

The argument that 'they [companies] sell water' (MoHR) appears to legitimize food companies' position in the context of public health. The informant did not relate the topic to the public right to free drinking water (provided by the state) or reflected on the dual role that soda companies might have in other policies concurrent with the soda tax, thereby influencing public health in other ways. The inclusion of the F&BI and their formal role in policymaking seems to be justified by the idea that selling bottled water to consumers is an alternative healthier choice.

Contrasting claims about the origin of the ENPCSOD presented earlier, and the lack of clarity about participation, indicate that the process lacked transparency, although this process was labelled as having a participatory approach. No public records are available regarding the official participants who attended the workshops to design the ENPCSOD; therefore, the actors' accounts are the main source of information about this process. Accordingly, the lack of transparency and consistency points to a potentially biased participation at this stage of the policy and highlights the active role of the F&BI in the policy design.

Academics' participation

The precise role played by academics in the ENPCSOD is not clear. Academics and international agency members declared that they were not formally invited to participate. One researcher mentioned that they were only consulted to comment on some of the indicators to be used in the ENPCSOD's evaluation plan (OMENT); however, they were not part of the evaluating group:

In the past administrations [from the PAN party], they did include us as experts in nutrition. This time, we were not included. It depends on each administration. We [people at the organisation] do not see

experts [in the administration] in this area; instead, we see it has members who are well known in the area of policy, but I don't see in this group [OMENT] a real expert, and that could be a weakness of the evaluating body. (ACA)

MoH representatives stated that civil society organisations and academics did participate in the process. However, a review of the participants showed that CSO members that were involved in promoting the agenda for obesity (ContraPESO, Polithink, Fundación Mídete, ANSA and EPC) revealed they were not included in the advisory group, but only one: ContraPESO (OMENT, 2014). Chapter 5 discusses the remaining invited organisations that had links to the F&BI. Parallel to the confirmation of the OMENT by the government, an independent group of researchers, led by the INSP, evaluated the impact of the soda tax. An international academic mentioned that she and other academics were invited to join this group:

I [an international academic] was invited by the INSP and by the University of Carolina to do an evaluation on the soda tax; I already went to one meeting. (ACA)

International participation in policy formulation

As mentioned in Chapter 5, Bloomberg Philanthropies (BP) was part of the coalition who started advocating for an obesity policy in Mexico (Nestle, 2015). They were not invited by the MoH to participate in any part of the ENPCSOD design, or by the MoF to any workshops conducted during the policy design, as mentioned by an international organisation representative:

We wanted to support the work the government is doing to address this problem of overweight and obesity, but it seems that we do not interest them. (IAR)

However, they provided their help and support to non-state organisations who were advocating for policy changes:

I think international interest can help or hurt depending [on the circumstances]. As I said, the groups we supported were already working on this issue [...], but obviously with funding, organisations can do more of what they were doing before [to advocate for policy changes]. (IAR)

While findings suggest participation of civil society in the formal policy development was strong when the soda tax was part of a legislative initiative, it was the opposite when it turned into a federal policy initiative. Academics and international organisations were not invited to contribute in the formal policy design process, especially by the MoH and MoF. While, F&BI participation was strong during the MoH consultation process. The possibility of conflicts of interest owing to the inclusion of the F&BI in the policy design was not considered a problem. Instead, state actors seemed to consider F&BI actors' participation as a positive part of the design process.

VI. The Mexican Observatory on Non-Communicable Diseases (OMENT)

When the ENPCSOD (obesity strategy) was launched in September 2013, the MoH announced that it would create a national observatory to monitor and evaluate the obesity strategy called '*Mexican Observatory of Non-Communicable Diseases*' (*Observatorio Mexicano de Enfermedades No Transmisibles OMENT*), which included the soda tax. In October 2014, the MoH organised the OMENT. When interviews were conducted for this thesis (October 2014), one of the main topics covered was the interviewees' knowledge of who would be part of the OMENT and how it would be structured, as none of this information was publicly available at the time. According to the MoH, the multi sectoral platform was planned to include members of civil society and of F&BI, as stated in the official federal diary (*Diario Oficial de la Federación [DOF]*) (DOF, 2014, p. 1).

Establishing indicators for the OMENT

A representative from the MoH mentioned that they would be working with two institutions, the Aspen Institute (Instituto Aspen -IA) in Mexico and the Mexican

Institute for Competitiveness (Instituto Mexicano de la Competitividad - IMCO) to develop 82 indicators that would cover a range of issues including not health and environmental goals:

The indicators will measure the environment, for example, how the municipalities are performing in providing potable water fountains at schools and parks and how much the strategy is impacting productivity in Mexico. (MoHR)

The number of indicators mentioned by the actor at the time of the interview was inconsistent with the number of indicators (52) mentioned in the first report published by IMCO in August 2015, when OMENT was publicly presented (IMCO, 2015b; SSA, 2015). Additionally, the report's indicators and main outcomes for the regulatory pillar of the ENPSCOD were marked as 'pending' because they would be mid-term measures rather than results (IMCO, 2015b). Public records of the multi-sectorial approach of the design and development of the monitoring strategy OMENT were not available at the time of data collection. Only a few documents regarding the indicators to be used and the methodology for choosing them were available publicly (IMCO, 2015c; SSA, 2015).

As mentioned in Chapter 5, some organisations were commissioned to contribute in developing the indicators for the OMENT evaluation strategy (e.g. IMCO), but had members on their own committee boards with potential conflicts of interest, such as the head of CONMEXICO (the F&BI industry association described in Annex 4). These findings suggest a potential conflict of interest in building the indicators. Furthermore, the participation of non-state actors, including both the F&BI and academia, add weight to the claim about potential conflicting interests during the soda tax policy design process.

Establishing the advisory board of the OMENT

In September 2014, almost one year after the soda tax was announced in the Fiscal Reform, the Secretary of Health Mercedes Juan presented the OMENT (SSA, 2015). As published in the DOF, its 'technical-scientific' structure (DOF, 2014) included civil

society organisations, consortiums/confederations and associations of industry members, think tanks and academic organisations (Table 7.1).

ContraPESO (a coalition of associations explained in Annex 4) was the only pro-soda tax civil society group who the Ministry of Health called to participate as an advisor on the OMENT. By contrast, numerous actors who were against the soda tax, such as CONCAMIN, CANACINTRA and CONMEXICO, whose members included soda companies, and the National Association of Soda Producers (ANPRAC), were invited. Think tanks which did not have a public position for or against the soda tax, such as IMCO, Fundación Este País, Aspen Institute and Fundación Carlos Slim, were included, although the INPS and EPC were not invited. Furthermore, the Universidad Nacional Autónoma de Nuevo León, which was invited, later issued an independent report sponsored by ANPRAC about the negative implications of the soda tax.

Table 7.1 Advisory board for the government's obesity policies monitoring strategies and their links (OMENT, 2014)

Actor	Name	Links with F&BI	Links with other government organisation
Academics	Academia Mexicana de Pediatría	YES	NA
	Academia Nacional de Medicina	NO	YES
	Instituto Politécnico Nacional	NO	NA
	Sociedad Mexicana de la Salud Publica	YES	NA
	UNAL	YES	NA
Industry	CANACINTRA		YES
	CONCAMIN		YES
	ConMexico		YES
Civil	ContraPESO	NO	YES
Society	Fundación Carlos Slim	YES	YES
	Fundación Este País		
	Funsalud	YES	YES
	IMCO	YES	YES
	Mexicanos Activos	YES	NA
	Sociedad Mexicana de Cardiología	NO	NA
	Aspen Institute México	YES	NA
NA= Not available			

OMENT included two organisations who opposed the soda tax during the debate and who had previously received funds from soda and tobacco companies, namely, the FMD and Fundación Slim, respectively (Burch, Wander, & Collin, 2010; FMD, 2016). Furthermore, academic organisations who did not issue public statements about their positions on the soda tax were involved, such as Mexican Association of Universities and Higher Education Institutions (Asociación Mexicana de Universidades e Instituciones de Educación Superior - ANUES), Mexican Society of Public Health (Sociedad Mexicana de Salud Pública A.C. - SMSP) and FUNSALUD. The latter is the institution where the Secretary of Health used to work before taking office (Funsalud, 2016).

The advisory board comprising non-state actors from all sectors represented the obesity policy process as an ‘inclusive policy’, which was one of the central arguments of the federal government’s NDP (Plan Nacional de Desarrollo, 2013). According to this argument, the monitoring and evaluation body included all types of actors, regardless of their previous position on the policies included in the obesity plan (soda tax as well as food labelling and regulations regarding marketing food to children). Some actors included were linked to the soda industry, indicating a potential conflict of interest in participating in the process of evaluating the effect of the soda tax on reducing obesity. These relationships and networks stressed in Chapter 5 and illustrated here, showed that no attention or relevance was given to the clear conflict of interest this arrangement means for policy success.

VII. Summary

This chapter describes and analyses the development of the soda tax policy and how it was set out in different policy documents. It highlights the efforts of state actors to acknowledge the participation of non-state actors in the formal policy process; and to ensure that non-state actors have a legitimate and accountable representation in policymaking. It concurs with the principals of good governance outlined in Chapters 3 and 5. Mixed and contradictory information about the formal participation of the F&BI, civil society and academics was seen in the NDP, FR, ENPCSOD and OMENT policy formulation. Civil society members’ suggested that the

claims of an inclusive process were inaccurate. Some explained how they helped in the design of the soda tax legislative proposal, and they provided evidence to the MoF. However, they claimed that there was a distant relationship between civil society and the MoH, in contrast to the close relationship and participation of the F&BI. The study shows there was close engagement between the F&BI with some policymakers. Companies directly lobbied congressmen, while the F&BI participation in the obesity policy's design was active and seen by the MoH representatives as a legitimate and valuable contribution.

When the MoH was designing the ENPCSOD, although some academic actors were invited to participate, none of them had previously been involved in promoting an obesity policy (including actors from the National Academy of Medicine and academics from the Instituto Nacional de Salud Pública). The non-state actors invited to the workshops on the food labelling regulation and food marketing strategy were mainly from the F&BI, while a mix of actors played a role in the OMENT. The results show a perceived power imbalance from civil society during the policy design, as F&BI representatives were able to influence decision-making disproportionately in ways that were in opposition to, or not aligned with, civil society organisation's and academics' views on suitable outcomes of the policy development process (Buse et al., 2017, p. 34).

Chapter 8. Actions shaping the implementation of the soda tax

I. Introduction

This chapter examines the informal policy development. It analyses actions shaping the development of the soda tax that do not necessarily fall under the category of formal policy development, analysed in Chapter 7. It reflects upon findings from the documentary analysis and the interviews.

Alongside the formal government policy development processes described in Chapter 7, the agenda and policy outcomes were also influenced by strategies and actions taken outside the formal process by non-state actors. These strategies aimed either to influence policy outcomes, or to mitigate the policy measures once implemented. The approaches used included calls for action, launching counter-marketing campaigns, support for social movements, entering into fiscal agreements with the government, strengthening public-private partnerships, and influencing water governance. This chapter examines the influence of these actions on the soda tax discussion and implementation.

Figure 7.1 (page 146) presents the timeline of the soda tax policy development and implementation, and the main actions and strategies applied by non-state actors. Some of these actions denote non-state actors' concerns about the policy development process. For example, the sugary drinks companies were concerned about the implications the levy would have on their business, and as such introduced activities to mitigate the new regulation. Other actors engaged in activities to give continuity to their role as health advocates. In this chapter, actions are accounted for, and analysed as a changing dynamic shaping the socio-political context surrounding the soda tax and related policies, such as the provision of water. Competing interests within the health policy agenda are reflected in the data. Finally, as an example of such externalities, the findings related to Mexican water governance are presented, as one rhetoric put forward for using soda tax revenues for water provision.

II. Calls for action, and how they shaped the policy agenda

In this thesis, a call for action is defined as a strategy used by actors in the policy process to increase support for their own position. It includes calls for the government to regulate, public demonstrations (against/for the cause), and calls for diversifying investments. Different types of calls for action were triggered during the years the soda tax was contemplated as a policy measure, as well as during and after its implementation. Table 8.1 provides an overview of the various calls for action in chronological order.

Table 8.1 Calls for action implemented by different actors through 2011-2015

Type	Actor	Call for action	Addressed to	Year
Civil Society	El Poder del Consumidor	Call to implement policies to tackle obesity, including a soda tax	Government	September 2011
Government (executive power)	Federal government	Promote a National Pact with specific actions against obesity	All parties running for government positions	December 2012
Civil Society	Alianza por la Salud Alimentaria, ContraPESO, El poder de consumidor, Fundación Mídete	Call for actions on obesity policies (drinking fountains in schools, follow and monitor food guidelines, clear food labelling, regulate food marketing to children, promote breastfeeding and implement a soda tax)	Federal government and legislators	January-July 2012
Government and academia	Senators, Deputies and academics from Latin America	Invitation to support, promote and implement policy actions in Latin America to reduce obesity	Civil society, government, academics	November 2012
Academia and International Organisations	PAHO, WPHNA, WOF, BP, CSPI	Call for the federal government to regulate marketing, taxing SSB labelling	Federal government	January 2013
Food and Beverage Industry	CNIAA, CONMEXICO, ANPRAC	Public call to oppose the soda tax		August and October 2013

Food and Beverage Industry	Coca-Cola FEMSA/ PepsiCo brokers	Call to promote other programs and actions	Investors/internal	2012-2015
		Invest/innovate portfolio		2013
		Diversify market to the (e.g. Philippines)		2013
		Adapt to the market conditions		2014
Academia and International Organisations	INSP, ITAM, PAHO, Universidad Sao Paulo, INTA, ANM	Call to reflect on solutions to overcome the obesity problem in Mexico and Latin America	Academic colleagues, governmental actors and international organisations	October-November 2016

*Acronyms explained in the Glossary section 1

The first time a national organisation published a call for action aimed at the government to implement a soda tax was in September 2012. El Poder del Consumidor (EPC) published a press release with the title ‘We Ask for a Soda Tax’ (EPC, 2011a, p. 1). Although the press release did not mention the word ‘tax’ except in the title, it highlighted the high consumption of a soda in Mexico and the lack of access to potable water, as both being primary causes of obesity. EPC promoted this call to action with support from BP (as described in Chapter 5). This press release was the trigger point for further political discussion on the topic. The document concluded with the following statement:

We observe that neither the federal government nor the local governments have implemented any comprehensive policy against obesity, as it has been recommended by international organisations. (EPC, 2011a)

Also in October 2012, academics organised a forum with speakers from different backgrounds to promote health policies addressing obesity. The forum was held at ITAM and the opening session was called ‘Fiscal policies as a tool to reduce consumption of SSB’ (*Política fiscal como herramienta para disminuir el consumo de bebidas azucaradas*) by Dr Frank Chaloupka (Chaloupka, 2012). The forum

presented the views of different actors on the soda tax and served to orchestrate future actions to increase the debate on health taxes. Later that year, the National Institute of Public Health, University of Sao Paulo and INTA, Santiago, Chile organised a conference on obesity policies in Mexico. It included members of the Congress, academics, members of consumers' organisations from Mexico, Brazil, Peru, Costa Rica, Uruguay, and members of the Pan-American Health Organization (Rivera, 2012). The final output was a signed letter to commit to promoting, advocating and implementing policies for obesity, including fiscal measures (WN, 2013).

After this meeting, from October to December 2012 calls for action came from academia and civil society groups. In December 2012, ten days after Peña Nieto's government took office an initiative was presented in the Senate proposing a 20% tax. Congress voted against it at the time. The chain of events preceding the presentation of the initiative, suggest a series of actions by non-state actors to support the initiative. Stakeholder accounts suggest the proposal was expected to fail in Congress at that time, but it was necessary to present it to increase pressure among policy makers, as mentioned by a think tank member who acted as a policy entrepreneur:

We knew that the senator's proposal was not going to pass, but we decided to support her to start a public dialog, an advocacy strategy for 2013. (TTM)

Immediately after the soda tax was rejected in Congress, in January 2013, a public academic event was organised. The ANM presented the book they had edited with the INSP (link described in Chapter 5) (Rivera-Dommarco et al., 2013). The media called it the 'white paper' for addressing obesity, as it included a brief chapter about the position and recommendations for policy change by the academy. The main arguments reflected their views about how marketing and prices of unhealthy foods were the core areas of intervention, and how 'hard policies' would protect 'fundamental rights':

Regulation should be used as an instrument to ensure a good performance of the State to guarantee fundamental rights, to intervene on markets and minimize their externalities on the risk of causing obesity. (Rivera-Dommarco et al., 2013, p. 6)

During the first half of 2013, a number of calls for action favouring the soda tax were published and implemented by the civil society as mentioned in a report published by BP in 2015:

[Civil societies] purchased full-page newspaper advertisements in key national dairies like la Jornada, Milenio, Reforma, El Universal. For example, a broad-based coalition (Alianza por la Salud) called for a 2 peso per litre tax and underscored that both national and international experts propose soda taxes as an effective measure to address obesity. (Donaldson, 2015, p. 13)

During the public debate organisations such as WPHNA, IOTF, and PAHO supported groups such as ContraPESO, and Alianza por la Salud Alimentaria (Alianza por la Salud Alimentaria, 2012a; Donaldson, 2014) by co-signing their positions published in the media. While the civil society used the media for their purposes, the response was not always favourable:

Some of the broadcasting and media were [our] allies in the discussions in the newspapers [...]. Reforma was our ally; they published some of the initiatives and explained the debate accurately for the soda tax [...]. There were several digital media that allowed us to publish texts. However, there were others [media organisations] that were against [us]. Also, some journalists wrote columns in newspapers and opinions about the negative effect of sodas, as mentioned by Catón, a very well-known writer, in his column. (TTM)

The same year the Fiscal Reform was announced, soda companies called for portfolio diversification and expansion to other countries, as a preventive action. Investment in the region was expected:

We expect to see more value added innovation specifically geared toward the Latin American market as manufacturers compete for the money people are willing to devote to soft drinks. (Euromonitor, 2012)

And, while the Congress voting on the Fiscal Reform, between August and October 2013, and before it took effect in January 2014, the food and beverage industry through CONMEXICO called for opposition to the soda tax in their press releases:

CONMEXICO expresses its energetic opposition to special taxes to food and non-alcoholic beverages as a Public Health measure, as well as a discriminatory treatment to any food. (CONMEXICO, 2013)

As regards government actors, the Ministry of Health first talked about the soda tax a few months before its official discussion. The first statement by the Secretary of Health, Mercedes Juan, was made in March 2013 who said:

The important thing is to educate people so they're aware of the health effects because you can't force anyone not to drink soda. (SSA, 2013a, p. 2)

Her statement avoided the original question of the interviewer about the approval of soda tax raised by the press, but highlighted education as an important approach for behavioural change. By pointing to the unsuitability of coercive action on soda consumption, Juan stood for the 'right to choose,' similar to the industry discourse (CLC, 2013). This implies a similar narrative of the government and the private sector. Thereafter, and before the soda tax was formally proposed by the executive, no additional public statements were made by the MoH. During interviews conducted for this study, the MoH actors avoided the topic, as exemplified by this quote:

Look, ask [the Minister] of Finance [...]. The first one who decided on the tax was the legislative party, so you would have to ask them. (MoHR)

In September 2014, almost one year after the soda tax was announced in the Fiscal Reform, the Secretary of Health, Mercedes Juan, publicly supported the soda tax, particularly during the presentation of the OMENT (OMENT, 2014), and later in 2015 through public statements about the positive effects of the soda tax in 2015 (SSA, 2015).

Calls for actions not only helped to build up positions among policymakers, but these findings suggest they were also means to increase public support for these positions. To support these actions, actors also used marketing strategies as discussed below.

III. Use of marketing strategies to oppose or support the tax

Marketing strategies have been used to influence public opinion, public choice (when selecting what to drink) and actors support for a specific position towards the soda tax. Marketing principles include the four Ps: promotion, product, price, and place (Rayner, 2007; M. Wood, 2016). Both the soda industry and civil society groups who were advocating for the soda tax tried to use at least one of these four principles. The soda industry promoted and improved the place of their beverages by distributing refrigerators to small business (388,000 coolers were distributed in 2012), resulting in 73% of Mexicans having refrigerated products (Coca-Cola FEMSA, 2012, p. 6). Further industry strategies included improving the availability of their products, making them convenient to get, by innovating ways to distribute and market their products:

[We intend] to go beyond retail into other encouraging high-traffic venues such as universities and offices - engaging directly with consumers. For example, we conducted a promising pilot offering both beverages and snacks at some 'at work' locations in Mexico. (Coca-Cola FEMSA, 2012, p. 7)

Although Mexico implemented a regulation to restrict sweetened beverages in schools in 2010, it was not well monitored (Barquera et al., 2013). As a result, despite the regulation, companies aimed to expand the availability of sugary drinks

at workplace and schools. Additionally, two of the main soda companies launched several massive campaigns to strengthen consumers' trusts and loyalty to their brands during 2012-2013. Both were linked to happiness:

We launched successful campaigns to endorse connecting consumers with the brand, as the tour of FIFA World Cup, 'Share a Coke' and 'Make someone happy,' among others [...] strengthened yet more loyalty to our brand. (Coca-Cola FEMSA, 2014)

Coca-Cola also engaged in indirect promotion through funding academic institutions to conduct research on happiness. In 2013, the Coca-Cola Happiness Institute presented its new website inviting people to explore and learn from more than 400 studies selected from nearly 8,000 on Happiness and Health (Coca-Cola FEMSA, 2013). Also, PepsiCo funded a training program for students in the State of Mexico in coordination with the governments' National College of Professional Technical Education (CONALEP) in the State of Mexico preparing participants to integrate into the labour market (PepsiCo, 2012).

In 2014 another marketing principle, using audience segmentation, focusing particularly on women, was highlighted by PepsiCo:

PepsiCo serves consumers of every income group and ethnicity, on every continent, and in intensely competitive markets. We also know that women make the majority of food and beverage buying decisions. Understanding how to meet the needs of such a diverse cross-section of global consumers requires a diverse and talented workforce. (PepsiCo, 2014)

These strategies were clearly attempts to draw attention away from the negative connotation of sweetened beverage consumption that was gaining strength through the dissemination of international recommendations about reducing soda consumption, promoted by Mexican civil society and academics (Donaldson, 2014; PAHO, 2015).

During the same period, civil society groups launched a social marketing campaign to position 'drinking soda' as a negative behaviour. Although it was only promoted in Mexico City, it was highly acclaimed and had an important reach all over the country:

Our program partners created subway advertising campaigns in Mexico City depicting the negative effects of obesity. The Director of the Latin American Office of the Food and Agricultural Organization of the United Nations praised the ads and called for their replication across Latin America. (Donaldson, 2014, p. 4)

However, the social marketing campaign failed to be included in one of the major TV networks:

Televisa, TV Azteca and Milenio TV, for over a month, have denied accepting our ad that exposes the benefits [the soda tax] can bring to the people [if its] proceeds is used for the introduction of water fountains in public spaces, while they accept intense advertising of soft drinks and sugary drinks. ("Acusan a Televisa, TV Azteca y Milenio TV de negarse a difundir spot contra las refresqueras," 2013)

These accounts suggest that the main broadcasters in Mexico appeared to be compromised, but data obtained during this research did not find a direct link to any key actors who were against the soda tax, such as the F&BI or the sugar cane producers.

Soda companies and sugar producers not only improved marketing to increase brand loyalty, but they also sponsored campaigns to portray the negative implications of the tax. For example, sugar cane producers launched a campaign entitled '*Hablemos de Azúcar*' ('Let's Talk About Sugar'), stating that sugar is 'a little happiness every day' (Hablemos de azúcar, 2016), while the director of 'Centro para la Libertad del Consumo' (The Centre for Consumer Freedom), a front group, made a video saying, '[The soda tax] messes with our free choice and consumption' (CLC, 2013). Additionally, this group sponsored advertising with the questions: 'Can you

bottle obesity with taxes? Yes or no on the tax on chubby people?’ (Donaldson, 2014) (CLC, 2013). Furthermore, according to the same report, the industry engaged local store owners by distributing posters and other incentives to display the poster saying ‘This store and its clients say NO to another soda tax’, indicating actors’ loyalty to the brand and promoting a negative position for the soda tax (Donaldson, 2014, p. 5).

A media battle started in June 2013 between civil society organisations and the companies and groups opposing the soda tax. Regardless of the outcome of the soda tax, this public exposure of the different counter-arguments might have had a positive effect on public opinion regarding the tax, as reported in a poll conducted at the end of the year (PAHO, 2015).

IV. Public demonstrations and human rights arguments

Another strategy used by non-state actors to mobilise public support and to promote the tax included public demonstrations (EPC, 2012; Nestle & Rosenberg, 2015). The civil society used the ‘right to health’ as their central argument to call for demonstrations, in contrast to the food industry and industry consortiums arguments for the ‘right to choice’ and free markets. On their website, the civil society Alianza por la Salud Alimentaria cites the Universal Human Rights of 1948 and the International Pact of Economic Social and Cultural Rights of 1966:

It is a human right to have on a regular basis, permanent and free, either direct or by buying it, access to an adequate diet. (Alianza por la Salud Alimentaria, 2012c)

The basic human right to an adequate diet is promoted in combination with other rights, such as the right to free drinking water, a right to health and children’s rights. The ANSA’s site discusses the high intake, availability and promotion of sodas and high-caloric foods and how they interfere with the rights mentioned.

Meanwhile, corporate documents showed that companies engaged in social programs addressing minority groups, sometimes in collaboration with public

institutions and international agencies (Coca-Cola FEMSA, 2014, 2015a). Also, free choice and free consumption were promoted. For example, in October 2013 González de Tagle, a corporate lawyer heading the industry front group 'Centre for free consumption' (Centro para la Libertad del Consumo), mentioned in one public video 'soda tax is a measure that is ineffective, under such an argument, tacos should be taxed, it messes with our free choice and consumption' (CLC, 2013). At the time this document analysis was performed (2016), the group had no longer a website.

V. Increase in corporate social responsibility activities related to health and food

Corporate social responsibility (CSR) includes in its multiple definitions words such as 'commitment', 'concern about', and 'ethical actions.' According to Van Marrewijk (2003) the definition of social responsibility is often biased toward specific (often corporate) interests and thus prevents the development and implementation of the concept; however, such biases are not supported by empirical evidence (Van Marrewijk, 2003). Dahlsrud (2008) suggests that 'any attempt to develop an unbiased definition is challenging because there is no methodology to verify whether it is indeed unbiased or not' (p. 2). The most common approach to corporate social responsibility is '[a] concept whereby companies are integrating social and environmental concerns in their business operations and their interactions with their stakeholders on voluntary actions' (Dahlsrud, 2008, p. 3). Another common definition is 'the commitment of business to contribute to sustainable actions, economic development, working with employees, families the local community and society to improve their quality of life' (Dahlsrud, 2008).

Soda companies promote themselves as socially responsible. Their annual reports emphasise words such as: 'commitment', 'helping and volunteering', 'being generous or inclusive' and 'having values and being philanthropic' (Coca-Cola FEMSA, 2013, 2014). They include actions such as improving access to water and sanitation, empowering women, providing education (including schools such as PepsiCo University, or by supporting public schools), offering cultural programs, improving lifestyles with physical activity programs, developing environmental programs and using sustainable technologies (PepsiCo, 2012, 2014). These actions

are framed as reflecting core company values with the aim to build trust and engagement with consumers and investors. Table. 8.2 shows some of the social responsibility actions described in the soda companies' annual reports (Coca-Cola FEMSA, 2013, 2014).

Table 8.2 Social responsibility actions framed in corporate documents

Company	Quote as on document	Year
ARCA Continental	Social responsibility and sustainability are essential parts of ARCA Continental's values and organizational culture, and key elements in our business [...]. These two concepts are included in all the company's strategic decisions.	2012
Coca-Cola FEMSA	At Coca-Cola FEMSA we are dedicated to reducing and relieving the environmental impact of our actions, basically on water, energy, residual and recycling areas, by investing more than 2.3 million dollars [in these areas] in 2014 [...].	2013
Coca-Cola FEMSA	In our community, we are committed to fostering active and healthy lifestyles, including good nutrition, hydration, and physical-activity habits, investing more than 3.5 million dollars. Because of these actions, during 2014, more than 737,000 people have benefitted from our Healthy Lifestyle and Community Development programs.	2013
PepsiCo	The Mission of PepsiCo Foundation is to: promote sustainable development in the most needed regions where we operate through strategic partnerships that integrate the areas of education, health, and environment, providing the means to create self-sustaining communities by improving their quality of life.	2013

Soda companies were creating strategies to overcome the impact of the soda tax on consumers' behaviour while still improving profits, regardless of an increased sales price. The social responsibility actions are framed as an overarching value of the company to increase empathy with worried consumers. These findings concur with tactics used by the tobacco industry (Brownell & Warner, 2009) and by the F&BI in other countries (Hawkins & Holden, 2013b; Mialon, Swinburn, Allender, et al., 2016).

VI. Fiscal concessions for the private sector

The federal government wanted to address obesity and health concerns (ENCSOD, 2012), but keeping the F&BI involved in their activities. This was justified on

grounds that the F&BI was a 'legitimate industry in Mexico', whose role in the policy process was perceived as important, as described by a MoH representative in Chapter 7 (page 157). The government launched a comprehensive obesity strategy, the ENCSOD, and not only included F&BI representatives in the decision-making, but fiscal incentives were provided to the F&BI simultaneously to the proposed introduction of the soda tax. In December 2013, the government posted an addendum to the Fiscal Reform, which included economic benefits for sweetened beverage producers:

A fiscal stimulus is granted to importers of juices, nectars, fruit concentrates or vegetable and beverage products in which milk is a component that is combined with vegetables, dairy cultures, or Lactobacilli, sweeteners or other ingredients such as drinking yoghurt, fermented milk product or liquefied and non-carbonated water or whose presentation is made in containers under ten litres. The fiscal stimulus equals 100% of the value added tax (VAT) payable on the import or sale of the above products. (DOF, 2013b)

The amendment to the Fiscal Reform also included fiscal incentives such as fixed deductions to companies engaged in certain philanthropic activities related to health and environmental remediation:

A tax incentive will be given to taxpayers for donations of commodities for human subsistence such as products for healing or feeding [...] equal to 5% of the cost of sales that would had been made and are actually donated. (DOF, 2013a)

In addition, the federal government signed an agreement with CONCAMIN (see Chapter 5) in which the government committed to avoid further tax increases on any of their products or services. The latest amendments published in the Fiscal Reform would be the only changes made at least until the end of Enrique Peña Nieto's government, as this part of the document mentions:

Exceptions to make modifications to taxes. In the period beginning today [24 Feb 2014] until 30 November 2018, the Federal Executive will only propose amendments in response to substantial macroeconomic events to which it is imperative to make adjustments to the tax framework. If none of these occur, the Federal Government will not propose any changes to the tax framework to Congress. (SEGOB, 2014)

Evidence presented here suggests close relationships between the government and F&BI during and after the soda tax implementation, but the interaction between actors was not always publicly disclosed.

VII. Public-private partnerships

As mentioned in chapter 5, public-private partnerships (PPP) between the government and the F&BI were another important strategy used to overcome the soda tax. These arrangements were found to be beneficiary for both government and industry, as some corporate actions or corporate social responsibility actions (as companies frame them) were also part of the social policy of the country. Chapter 5 mentioned the partnership of Pepsico and CONAGUA, existing even before the soda tax debate, but at the time of the policy change, a collaboration between a charity funded by Coca-Cola and the government was launched to improve physical activity in schools:

Coca-Cola FEMSA and Fundación Movimiento es Salud A.C. (Movement is Health Foundation) in partnership with the National Committee for Developing Physical Activity in Basic Education (Consejo Nacional para el Desarrollo de la Educación Física y el Deporte en la Educación Básica - CONDEBA) will support an education project in physical activity, nutrition and health in order to sensitize more people about their health and the importance of living an active and healthy life. (Coca-Cola Foundation, 2014c)

Information about the Fundación Movimiento es Salud A.C was not updated on the website, and the links on the webpage were not working. According to one interviewee, the foundation was not independent but was either a front group or a civil society organisation embedded in the company.

The PepsiCo Foundation, which was established in 2011 under the administration of Felipe Calderon (PepsiCo, 2011) with the BID when they authorized a loan of 600 billion MXP (31.5 billion USD) for the program *Agua Saneamiento e Higiene en la Educación Básica*. It still remains active and has consolidated over the years, as their webpage mentioned:

PepsiCo and the PepsiCo Foundation are deeply committed to respect for human rights and have publicly announced this alliance with the IDB to meet the global objective of providing access to safe water for three million people in developing countries through 2015(PepsiCo, 2011).

A number of PPPs were involved in the installation of water fountains in schools. The government committed to providing schools and parks with drinking water and the legislature proposed an addendum to the soda tax a few months after the soda tax was approved to establish an escrow to use the revenues for water provision (AguaOrg, 2015a; Senado de la República, 2015). In 2014, Coca-Cola Mexico collaborated with Healthy Schools (Escuelas Saludables A.C.), a civil BID society association founded the same year with the purpose of providing drinking water to public schools. The organisation's webpage mentioned:

Through its national program of Hydrate Centres, and together with [us], Coca-Cola installed drinking fountains in 999 public schools extending water provision to 279 thousand students and teachers from 198 municipalities. (Coca-Cola Foundation, 2014a)

In another example, the institute in charge of school infrastructure in the State of Durango, the Institute of Physical Activity Infrastructure (Instituto de la

Infraestructura Física Educativa del Estado de Durango - INIFED), was part of a regional partnership:

[...] Saturday February 22, 2014 in Durango the first cooperation agreement between Coca-Cola Hydrate Centres, Escuelas Saludables A.C. (Sustainable Schools, A.C) and INIFEED was signed, as well as in Nayarit two days before. (Arca Continental, 2014a)

In 2014, Coca-Cola FEMSA initiated a program called Water for Our Future, partnering with the Latin American Water Funds Partnership, and other Coca-Cola bottlers. Its aim was to conserve more than 6,000 hectares of watersheds, replenishing 6.9 million cubic meters of water to nature through an investment of US\$7.4 million in at least five countries in the region. (Coca-Cola FEMSA, 2014).

The latest PPP established between Coca-Cola and the government found in literature for this research was established in 2016. In October 2016 the President, together with the Secretary of Health, the Secretary of Economy, and the head of CONACYT opened the Centre for Innovation and Development Coca-Cola (Centro para la Innovación y Desarrollo Coca-Cola - CIDCC), with the purpose of 'investing in the generation of sustainable values through research' (Coca-Cola FEMSA, 2016, p. 1). Its aim is to work throughout Latin America, and be involved in water governance. During the opening event the President publicly stated that he was a loyal customer of the brand and that he had one Coca-Cola every day, and that this effort responds to his call to partner with the private sector to support research and employment in the country. As outlined in Chapter 7, the private sector's active role as a partner of the MoH exposes a conflicted environment for public programs for obesity prevention. The CIDCC opening event was heavily criticized by the press and CSOs, but no changes to the structure of the partnership were made.

As described in the literature, PPP benefits include improving the visibility of social actions (Kraak et al., 2012, WHO, 2007a), in the case of the CIDCC, to water. This conflicts with vested commercial interest of corporations, which commercial fiduciary duties to their shareholder are above any social responsibility actions (Joyner & Payne, 2002). The research shows that the conflict of interest these cases

imply are not a matter of concern for the Mexican government when partnering with the soda industry.

VIII. Civil society demands for accountability of the soda tax revenues

Civil society groups continued to hold the government accountable and to push for an increase to the soda tax rate. They requested the government to disclose whether revenues were being used to provide water access, and lobbied legislators to continue the push for regulations to tackle obesity. A push for an increase by 20% on the soda tax was on their agenda, as stated in one of their reports:

[The government needs to] increase the tax from 10% to 20%, i.e. from 1 to 2 pesos per litre in order to achieve a substantial reduction in their consumption. (Calvillo, Espinosa, & Macari, 2015)

They also fought for the use of soda tax revenues for water provision:

Allocate an adequate amount of the resources obtained through the application of the tax to sugary drinks in actions of prevention and control of obesity and diabetes, including the installation of drinking wells. (Calvillo et al., 2015)

These claims were supported by the Mexican Association of Cardiologists in a press release published in September 2015 calling on the government to improve availability of free drinking water in public spaces, especially schools, stadiums, parks, and in all cultural venue (cinemas, theatres, auditoriums, forums, tents, etc.) (Sociedad Mexicana de Cirujia Cardiaca, 2015). In addition, CSOs with no commercial interests accused the government of having a conflict of interest as regards their obesity policy (Calvillo et al., 2015). While the academia recommended the government to consider changes on the policy following transparency principles:

We recommend these actions [should be applied] within a culture of open government, seeking as a primary objective the health of Mexicans. For this, it will be essential for all processes to analyse the

sources of potential conflict of interest of the actors involved and to act with transparency. (ACA)

Finally, some civil society groups continued to support policies to tackle obesity (FM, EPC, ANSA). They supported legislation proposed by several senators to increase the tax (Radio fórmula, 2016), though it did not receive enough votes to pass in the Senate. They also supported a senator's proposal of an Obesity Law, aimed at providing statutory and cohesive measures to the ENPCSO (Senado de la República, 2014). Several civil society organisations represented by ANSA, and the ContraPESO coalition began to work on a proposal for a General Law on the Prevention and Control of Overweight and Obesity, with the support of renowned academics from ITAM and CIDE (Fundación Mídete, 2015). Its purpose was to introduce a comprehensive legal framework based on scientific evidence and international experts' recommendations, emphasising 'the protection of the constitutional rights to health, food health, information, consumers, and above all, the best interests of children' (Fundación Mídete, 2015).

Civil society groups supporting the soda tax continued to push for increased regulation after the initial legislation was approved. While they have been unable to cause further regulatory change in the country, they have raised public awareness and used litigation to improve the outcomes of the obesity agenda. As an activist mentioned in respect of their continued attempts to influence obesity policy:

The latest battle to impose a soda tax of 10% to SSB was won by the alliance of legislators, civil servants, health professional bodies, citizens and supportive media orchestrated by El Poder del Consumers public interest organisation [...]. Protests and campaigns by public health advocates and activists are effective and can inspire similar actions in many other countries. (TTM)

IX. The influence of non-state actors on water provision

Chapter 1 discussed water available for human consumption and its use for producing soda in Mexico. The following section will describe how the government

and private sector portrayed their actions (laws or activities) around national water governance.

Water provision and the use of soda tax revenues

A few months after the soda tax was implemented, a legislative addendum was approved to allocate revenue from the soda tax to 'invest in providing access to water to all primary schools' (Senado de la República, 2015):

[The decree] amending the General Law of Physical Educational Infrastructure makes the sufficient supply of potable water for human consumption mandatory in all educational levels, pre-school, primary, and high school, by adding drinking fountains. (AguaOrg, 2015a)

The Centre for Studies of Public Finance estimated a three-year investment of just over 9 billion pesos (Senado de la República, 2014). The funding approved to comply with the decree was 1,360 million pesos in 2014, which is only 14% of the estimated cost and as such insufficient to fund the current demand for drinking water. Until 2015, no clear information of the application of this decree had been published. In May 2015, IMCO reported only 14% of the schools had working water fountains. Moreover, that year a lower chamber congressman presented a new initiative to earmark the tax:

The six-year goal was to include 40,000 drinking fountains in public schools, but according to the Ministry of Education's reports, only 6.68% of that goal was completed, and so far only 2,675 water fountains have been installed (1,175 in 2014, and 1 5000 in 2015). (IMCO, 2015a)

In December 2015, after a petition asking for water fountains in schools the Ministry of Education stated that for 2016, 34 million pesos (1.3 million GBP) will be allocated to install and maintain the water fountains (DOF, 2015). Besides the lack of resources allocated to the water fountains, the quality of water was an issue. According to the documentary analysis, water pollution following international standards seems to be poorly monitored. A report analysing samples of 62 water

wells throughout the country showed they were all polluted (CONAGUA, 2014b). The current environmental norms with pollutant parameters are out of date in comparison with international standards as one of the norms cited in the General Law is from 1997. According to National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía - INEGI), 70% of all water in Mexico has some degree of contamination, and at least 260 sites are highly polluted (CONAGUA, 2014). For instance, a report by a civil society organisation mentions:

The inspections are sporadic, often without sampling, and economic sanctions on polluters are minimal or not charged at all. To understand the lack of political will to solve this national problem, it is enough to say that there are only five inspectors enforcing official standards. (AguaOrg, 2015b)

As stated by a policy document from the Ministry of Agriculture:

Compared to the European Union, where thousands of compounds are regulated and some are prohibited, in Mexico hundreds of toxic substances are discharged into rivers, mainly heavy metals. (SEMARNAT, 2014)

These findings suggest that neither the resources allocated to provide water are sufficient, nor does the quality of water for human consumption comply with international standards. Resources to maintain the quality of water and its access are not sufficiently addressed in laws and regulations; instead, the government relies on PPPs solve the issue. According to the INEFED, agreements with private partnerships were agreed to monitor the quality of water were considered (León, 2015).

Bottled water: an opportunity for industry

As discussed in Chapter 2, trust in drinking water quality among the population is compromised. People choose to hydrate from bottled drinks, either bottled water or other bottled drinks (soda, juice, or sugary drinks), as mentioned by a Euromonitor report:

In many emerging markets, the scarcity of clean water makes bottled water a necessary staple rather than a value-added refreshment beverage like juice or soda. (Euromonitor, 2012)

Euromonitor projects that the global production of bottled water will increase to 100 billion litres from 2013 to 2018, surpassing the previous five-year period by over 25 billion litres, making bottled water the world's fastest growing soft drink (Euromonitor, 2014). This increase in sales has been studied and called 'the commoditization of bottled water' (Barlow, 2010), with water becoming an increasingly profitable opportunity for business. The price per litre of bottled water ranges from US\$0.11 in India to US\$0.27 in Mexico, whereas carbonated drinks and juices range from US\$0.61 in India to US\$1.27 in Mexico (Barlow, 2010). This has caused manufacturers to review their portfolio products (Euromonitor, 2014). Additionally, the lack of potable water access, the low quality of drinking water available and loopholes in the legal framework for water springs concessions become opportunities for businesses:

Demand for clean sources of water in emerging markets and demand for a healthier soft drink in developed ones [...] make [water] a commodity, with brand names easily replaceable by cheaper versions and a lack of a compelling reason for consumers to pay more. (Euromonitor, 2014)

Companies are using water springs to produce their products, regardless any changes to their portfolio (e.g. turning to unsweetened drinks), in soda or bottled water production chains. For example in Mexico, Brazil, and the Philippines, the average use of water to produce a litre of bottled beverage was 1.79 litres (Coca-Cola FEMSA, 2014; The Economist, 2016).

X. Summary

This chapter illustrates how the soda tax development and implementation, and associated regulatory measures (e.g. food labelling, market restrictions), raised a

range of concerns among non-state actors. Accounts by soda companies reflect their preoccupations and concur with documents of the Coca-Cola Company leaked in October 2016, regarding soda companies 'public policy risk matrix and lobby focus' (Pfister, 2016), and its global political strategy (Belluz, 2016). This caused the F&BI to invest in actions to manage or mitigate the reputational and economic risks, using marketing campaigns, changes in beverage portfolios and price architecture. The F&BI through PPPs, linked corporate social responsibility actions to social policy actions, and this was used for negotiation of fiscal benefits. The production of soda and sugary drinks was partially de-regulated at the same time as the soda tax became effective, which helped to reduce costs and facilitated market penetration, product innovation and diversification across Mexico. Meanwhile, the consumer was surrounded by a retail environment of competing messages and several sources of drinks for hydration: sugary drinks in other forms than soda, bottled water, either plain or flavoured with juices, low caloric drinks, and sodas that are more expensive. For most consumers in Mexico, access to free drinking water is not an option.

The regulatory environment in developed countries has become a major barrier for multinational food corporations, similar to the barriers faced by the tobacco industry (Basu, Stuckler, McKee, & Galea, 2012). In response, food and beverage producers are moving their markets to emerging economies such as Latin America and other developing countries in South Asia and Africa, with hopes to influence regulatory actions (Knai & McKee, 2010). According to scholars, these countries represent good opportunities because their legal contexts are generally weak (Knai & McKee, 2010), while civil society movements and pressure group actions are in their infancy compared to the US and the EU (Gómez et al., 2013). The soda tax in Mexico was an 'unexpected risk' for the soda companies as it came from a middle income country. The soda tax regulatory changes had a direct impact on soda companies' reputation and planned corporate activity. Soda companies experienced unexpected regulatory changes in a LMIC, in response, looked to make changes to compensate the financial damage, such as trying to reduce the scale of the tax and increasing their share of the bottled drinking water market. A range of responses to maintain revenues had similarly been seen by tobacco companies as a result of tobacco control regulation being strengthened in Latin America. Philip Morris did not foresee the introduction of a range of innovative tobacco packaging regulations

in Uruguay and actually filed a claim for compensation under international investment agreements (IIAs) (Thow & McGrady, 2014). The soda companies in Mexico or elsewhere have not made similar compensation calls as yet, but are likely to continue to develop new revenue streams.

In this case remediation actions include the mentioned PPP and also corporate political activate (CPA) throughout the debate. A key CPA was the soda companies' fiscal benefits gained through the process, as those offered. This and other fiscal benefits to foreign investors are likely to have direct effects on consumption pattern and may reduce public health policy space, as it happened in Myanmar and Coca Cola investments (Thow & McGrady, 2014).

Furthermore, actors from the civil society groups and academics remain part of the advocacy network demanding the use of the soda tax revenue for providing water fountains to schools and in public spaces. The policy entrepreneurs in the Congress continue to present formal proposals to hold the government accountable for the revenues from the soda tax. At the same time, the soda industry is central for water provision, use, management and commercialisation. This phenomenon accentuates a particularity of Mexico and some emerging markets where potable water either is not safe to drink, and the government as the provider of the 'right to access it' is highly reliant on the soda industry who also produce bottled water.

Chapter 9. Discussion

I. Main findings in relation to research questions

This study assesses and analyses the policy process related to the introduction of the soda tax in Mexico by applying elite interviews and documentary analysis. The overarching aim of this thesis is to explain how the soda tax emerged and developed as a policy issue in Mexico. It analyses in detail the contextual factors that facilitated the process, the process through which the soda tax became a policy option, and the principle actors involved in this process. It examines how different actors contributed to shaping the policy and their reactions since its implementation.

Contextual factors surrounding the soda tax

Seven main contextual factors were identified that facilitated the soda tax implementation. First, the change of government in Mexico providing a policy opportunity because of its interest in making reforms; as was the case in the Fiji islands when their health taxes were implemented (Thow et al., 2011). Second, the increasing public and government awareness of the evidence for the impact of SSB consumption on obesity and diabetes (Chapters 2 and 6). Third, concerns raised by international organisations about the high rates of obesity and SSB consumption in Mexico, especially compared with other countries internationally (Chapter 5). Fourth, the power gained by national public-interest non-governmental organisations due to the financial support by international organisations, through new alliances and use of media (Chapters 5, 7 and 8). Fifth, the new federal government's need for additional revenue streams (Chapter 5) at the same time as needing to be perceived as concerned with the populations' health (Chapter 5). Sixth, the parallel negotiations between government and private sector, beneficial to the F&B industry that mitigated some of the concerns of sugary drink companies nationally (Chapter 8). And finally, the importance of these political, situational, and structural factors merging at a specific point in time (Chapter 5).

Not only the high prevalence of obesity in Mexico and the high levels of soda consumption were factors relevant for having a context suitable for a regulatory

strategy as the soda tax, but the drinking water situation and its relationship with soda production and availability, as a determinant of diseases allowing to direct the revenue to address water access. There is a situation of power imbalance, as soda companies have a prominent role on the economic and political development of the country, as explained in Chapter 4. Water access and quality are compromised, while soda producers heavily use water not only to produce sugary drinks and sodas, but also to produce bottled water. Additionally, international trade agreements and the sugar production and usage in Mexico reflect the relevance of the sugar cane industry's for the country's economy, as well as why sugar cane and soda producers considered the soda tax and any 'hard regulations' as a trade. Thus, the importance of such actors as a structural part of the policy arena particularly for the obesity strategy and the soda tax; and their influence along the policy process.

Actors and actor networks influencing the policy process

The network analysis in Chapter 5 revealed important links between actors and organisations that affected the participation and influence of certain sectors during the design and implementation of the soda tax. Actors supportive of the soda tax initially included legislators from the President's opposing party (PAN & PRD), international organisations, academics and civil society members. Later in 2013, the tax was supported by the Executive power, with stronger support coming from the Ministry of Finance compared with the Ministry of Health. The non-supportive stakeholder groups were the food and beverage industry, some consumer groups and industry funded non-governmental organisations, which have been described elsewhere in analyses of how food industry tactics are used to influence policy (Mialon, Swinburn, Wate, et al., 2016; Newton et al., 2016; Yanamadala, Bragg, Roberto, & Brownell, 2012). Mapping the actors involved and exploring relationships and links between actor groups, showed how both existing and new networks were used to influence the soda tax agenda and implementation (Chapter 5 and Annex 4). In several theories of policy analysis, groups and networks represent a key element of policymaking (Marsh & Smith, 2000; Silke & Kriesi, 2007; Tantivess & Walt, 2008).

According to supporters of the soda tax, the MOH and MOF were initially seen to be resisting a soda tax when policy discussions started, and were not always strong

public advocates for its development as would have been expected. This thesis showed that they were strongly influenced by individuals and organisations having double roles in the process, and this created possible conflicts of interests, which were not made explicit. The analysis of the 'politics' stream of Kingdon's multiple streams theory, raised key questions about conflict of interests, accountability issues (who is accountable to whom), responsiveness of policy actors to the public concerns, and representation and power imbalance of non-state actors during the policy debate. Answers to questions related to concepts of 'good governance', go beyond the scope of this thesis. However, this research enables a window to examine particular contextual issues about actor relationships that steered the soda tax development in certain directions, such as (i) the inclusion of F&BI members on the executive boards of think tanks and civil society organisations' who wrote reports criticising the soda tax effectiveness, and who were part of the national board of the policy evaluation process, (ii) the relationships between policymakers and F&BI members, impacting the final tax (1 MXP per litre instead of the originally proposed 20%) or (iii) the economic support Bloomberg Philanthropies gave to public interest civil society groups, allowing these groups to increase their influence with the public and policymakers to promote the soda tax.

The sustained and ever-presence of the F&BI throughout the policy process, and in relationships with key policy actors, suggest strategies used, often called 'corporate political actions' and used broadly by tobacco companies in the past, were rapidly implemented when the soda tax became a policy option. Not only having an independent scrutiny of existing networks and relationships helped to sustain issues of transparency through the process, but helped to understand where the way actors framed the problem and the policy might be rooted. Furthermore, to incur how remediation actions occurred, and provided evidence of these corporate political actions taking place.

Framing the soda tax policy

As presented in Chapter 6, beliefs of different policy actors were framed in a way that facilitated getting a soda tax on the policy agenda. However, this also resulted in a polarised debate about the need for, and implications of such measure. Frames used in the soda tax debate were highly influenced by the evidence on SSBs and

health and how this evidence was presented to the public and key actors and used to justify actions.

The government framed the obesity policy which outlined the soda tax as a continuation of the policy previously started by President Felipe Calderón. It was framed as a policy addressing the weaknesses of the previous one. Interviewees recognised a problem of 'obesity' and of 'high' consumption of soda. The 'high' consumption of sodas was also framed by most interviewees as having a cultural meaning for the Mexican population. This research suggests it is also the result of excessive marketing and expanded distribution of sodas bottlers around the country. Additionally, there are normative beliefs that soda consumption is seen as a reward, as a result of an addiction, or that drinking water is unsafe.

The 'obesity problem' was framed as an individual choice or a choice embedded in a certain environmental context. Therefore the 'policy solutions' were framed respectively, either as a matter of changing individual behaviour of overweight or obese people, or as a need to improve the structural environment where the person makes consumption decisions. These frames are consistent with frames used by other researchers in public health and behavioural economics (Beeken & Wardle, 2013; Drewnowski & Darmon, 2005; Horgen & Brownell, 2002; Magnusson, 2010; Tversky & Kahneman, 1985). As it has been suggested by scholars, alternative framing of the obesity issue could not only help to reach target audiences but to expand to a range of potential partners in the fight. Also, as in this case, framing obesity as a political issue and educating people about the relevance of the environment in generating public debate of the different policy options, is a key goal for health advocates (Huang et al., 2015).

The solution was framed by policy makers as a policy solution that occurred thanks to a 'multi-stakeholder' collaboration. The soda tax was also framed as a positive solution to increase government's revenue, and to fund programs to improve health, such as water provision in schools and public spaces. Arguments used by industry members to frame it as a negative policy solution were its potential effect on the poor and its negative impact on the country's economy.

The outcomes of the ‘policy solution’ (soda tax) were framed in multiple, contradictory ways, depending on who produced or supported various evaluations or reports. For example, using evaluation data after implementation of the soda tax, some academics produced evidence to highlight the positive effects of the soda tax on purchases, while academics who received funding of the F&BI tax reported that the tax had only a ‘small’ effect on consumption and highlighted important externalities such as the economic negative implications for the soda industry in Mexico and the relevance for the country’s economy; and the effect the soda tax would have on poor families. Frames on the evidence used to support and oppose the policy identified during the debate are similar to those identified in similar case studies looking at SSB in New York or alcohol policies in the UK and in the US (Hawkins & Holden, 2013b; Nixon et al., 2015; Thow, Quesada, et al., 2011).

The soda tax policy formulation process

Chapter 7 presented findings on how the soda tax was formulated and included in the federal government’s policy agenda, after initially being a legislative initiative presented to Congress in 2012. The federal government proposed the soda tax in three policy documents: the National Strategic Plan, the Fiscal Reform, and the MoH’s Obesity Strategy. The proposal was modified from its original form (20% tax to 1 MXP per litre), however the rationale for the modification was not clearly explained. Findings from the interviews suggest the F&BI lobbied for this change directly with the Ministry of Finance, though no public, documented account was available. Lobbying to resist, and later in 2015 to dismiss the soda tax is a strategy consistent with the ‘public policy risk matrix’ as outlined in leaked e-mails from Coca-Cola in the US, illustrating that the lobby focus should be concentrated on ‘fight back’ against the ‘increase product taxes in Member States’ (Pfister, 2016). Findings showed that F&BI used tactics similar to those used by the tobacco and alcohol industry in the past (Hawkins & Holden, 2013b; Lee, Eckhardt, & Holden, 2016; Nixon et al., 2015; Thow, Quesada, et al., 2011). These are described in Chapter 5 (funding research, personal double roles, PPPs), in Chapter 6 (framing the evidence and the implications of the soda tax) and Chapter 8 (use of marketing, support social movements, PPP, tax benefits) and are consistent with what scholars describe elsewhere (Hawkes & Harris, 2011; Jacoby et al., 2012; Jensen & Ronit, 2015; Mialon et al., 2015; Moodie et al., 2013; Moschetti & Taylor, 2015).

Several contradictions were found in respect of the participation of non-state actors during the policy formulation. The perception of whether civil society groups advocating for a soda tax were able to fully participate in the process was disputed. Accounts and data suggest the F&BI was actively involved in the formal process of the policy development, enabling them to undermine policy outcomes. Results suggest the MoH endorsed participation of the F&BI by inviting them to participate in the obesity strategy's workshops, arguing they were a 'legitimate' industry and needed in the process, and ignoring (or not publicly acknowledging) the potential conflicts of interests this entails. Additionally, the MoH endorsement of the soda tax changed throughout the process. When the MoF initially supported the soda tax, the MoH did not make any public endorsement until much later; it was only after the first report showing a decrease in sales, that they did. Existing and new non-state actors emerged as important players when the MoH established the indicators for monitoring and evaluating the obesity strategy. Some of the invited participants were part of business-interest driven civil society groups, while others were F&BI leaders or members of academia who had support from the F&B industry. Clear targets and indicators to measure the impact of the soda tax were not made explicit in the policy documents, nor were interviewees aware of any indicators proposed for evaluation. After the soda tax was implemented, three groups reported on the effectiveness of the tax on sales, one in favour and two against it. All three groups were found to have ties with actors that might have influenced the tone and framing of such results (Chapter 5).

Non-state actors' activities shaping the implementation of the soda tax

Some non-state actors' activities were identified as key factors shaping the design and implementation of the soda tax. These included existing networks (community networks) and the building of new coalitions (issue networks) focused on the soda tax policy. Groups supporting and opposing the soda tax also organised public demonstrations; used direct lobbying; designed and paid marketing campaigns; and published reports to highlight the effectiveness or lack of impact of the soda tax. The contrasting frames used by different actors around the impact of the soda tax are discussed in Chapters 5, 6 and 8. All of these actions concurred with research on previous case studies and with the frameworks used for the tactics of the tobacco,

alcohol and food industries, also gambling, climate change deniers, NRA National Rifle Association, etc. Summarised as ***"MARSH"***: Misinformation, Attack, Recruitment, Substitution, Heaps used to influence policy (Lyness & McCambridge, 2014; Mialon, Swinburn, Allender, et al., 2016; Mialon, Swinburn, Wate, et al., 2016; Sacks et al., 2015; Salojee & Dagli, 2000; Stuckler, McKee, Ebrahim, & Basu, 2012). New coalitions built among civil society, academics, think tanks and international organisations was a novel network approach in the field of nutrition policy making in Mexico. As suggested by Huang, T, et al, (2015) obesity coalitions, among other strengths, can control media messages, rather than letting this messages be controlled by the industry or diluted by uncoordinated organizations. Support from international actors provided to national civil society groups and academics helped change the dynamics of power during the debate, include the support for media advocacy actions, and support to include some think tanks' expertise to the case. Previously, support from international organisations had been relatively low for civil society groups in Mexico advocating for nutrition policies. Results show that such international support is rare, as the nutrition and health sectors in Mexico including civil society organisations and related academic groups are heavily influenced by the F&BI (Chapter 5 and Annex 4). Until the soda tax emerged as a policy option, the influence of the F&BI was not perceived as a conflict of interest or problematic and it continues to be ignored or denied as such by some state policy actors (Chapter 8) (Burch, Wander, & Collin, 2010).

Finally, findings outlined in Chapter 8 suggest that there were a range of actions and reactions from state and non-state actors after the soda tax implementation. These included a range of actions that had positive outcomes for the soda industry and could be seen to mitigate some of the impact of the soda tax, such as fiscal agreements between the F&BI and the government; strengthening public-private partnerships between government and soda companies, especially for social programs and water provision in schools; and reformulation and market expansion of the soda industry (Chapter 8). Both supporters and opponents of the tax continued using various methods to publicly frame the impact of the soda tax in ways to highlight their contrasting position (Chapter 5). There were also ongoing declarations from academia and civil society organisations about the conflict of interest problems in the soda tax and across the wider obesity policy agenda. This

included demands for transparency and accountability for the use of soda tax revenues (Chapter 8). Some of these actions and reactions have also been identified in other case studies investigating unhealthy commodities such as tobacco and alcohol (Cairney, Studlar, & Mamudu, 2012; Hawkins & McCambridge, 2014;)(Pauly, Meapani, Lesses, Cummings, & Streck, 2002). This thesis therefore sums up the empirical evidence of such reactions to a policy measure in different settings.

II. Implications and contribution to knowledge

This study contributes to knowledge in different ways. First, this work helps to understand how strong corporate economic interests influenced nutrition policy-making in Mexico and how this may be relevant in countries with similar contexts (i.e. LMIC) (Clark et al., 2012; Ramos, 2013; Stuckler et al., 2012). The interests of soda corporations often outweigh public health policy responses such as soda taxes or food labelling regulation in other countries where lobbying has been highly present (e.g. South African soda tax proposal).

Second, it demonstrates that corporate interests continued to have an influence on the policy, not only during policy development but also after introduction of the soda tax. This was exemplified through the Fiscal Reform's addenda published few weeks after the soda tax policy document, which excluded certain beverages and provided a number of fiscal benefits to the soda companies. However, by adding the soda tax to the Fiscal Reform and publicly debating it, the government positioned itself as proactive and concerned about the obesity problem while being seen to 'punish' the sweetened beverages companies contributing to this problem (Cairney, 2016; Hay, 2011; Schneider & Ingram, 1993; Schneider & Sidney, 2009). Consequently, the F&BI continued negotiations with the government and ensured that they were actively engaged in the issue through corporate social responsibility actions, public-private partnerships, and ensuring remediation actions were introduced to overcome the impact of the soda tax on the soda producers. Currently, rhetoric about multistakeholder approaches as a way to build human, financial and regulatory capacity for change is dominating the public health agenda, and have been recognised by some as successful in obesity prevention programs (Huang et al., 2015; Perez-Escamilla et al., 2017; WHO, 2014b) Nevertheless literature on the risk

of such collaborations in obesity prevention programs or nutrition policy making suggest this mechanism legitimates the participation of “unhealthy commodity industries” in the policy process and nutrition program interventions and incur in potential damages, and jeopardize the public health efforts, as it is the case of the SUN (scaling up nutrition) movement (Lie & Granheim, 2017).

Third, this work contributes to research on framing in policy debates. It shows how the framing of evidence about the policy problem and the solutions influenced the agenda setting. It exemplifies how evidence related to sugar sweetened beverage consumption and obesity and diabetes is presented by academics and think tanks. Moreover, it demonstrates how the calls to action from international agencies (Mozaffarian et al., 2012; OECD, 2012; WHO, 2008, 2012) influenced the policy agenda in Mexico. While, for the civil society and supporters of the soda tax, solving the obesity problem by restricting the soda consumption and providing drinking water in schools became a matter of human rights (Chapter 8). It also shows how frames about the soda tax effectiveness were contested by those opposing the tax (Chapter 6). Framing access to drinking water and access to good food as a human right and as a public good, has become a prominent way that public interest civil society organisations are changing the narratives of food as a commodity (Pol & Schuftan, 2016). They use it to keep a vigilant attitude, and bring it to the policy debate and negotiations. This case, was a successful achievement of civil society in this matter, as access to free drinking water in public spaces as a human right, made the argument for the policy strong amongst politicians and public opinion, leading to an assigned budget for that purpose once the soda tax was implemented.

Fourth, this thesis also demonstrates that the soda tax brought new opportunities for some actors around the issue of drinking water. Soda corporations expanded their bottled water market. Concurrently many civil society organisations were able to advocate for improved drinking water supply. This thesis also shows how the links between sweetened beverage producers and drinking water government concessions are related to the market for bottled water in Mexico (Clapp & Fuchs, 2009; Farnsworth & Holden, 2006; Salvo, 2009). Models on the aetiology of obesity in Mexico have considered water access as a constraint, and further research is still needed to address and support policies for the provision of free drinking water and

to avoid loopholes in the current policy proposals to tackle obesity (CONAGUA, 2007; FAO, 2014).

Finally, this thesis provides evidence about ways in which food corporations wield their influence in regulatory actions within the national strategy for obesity prevention, and also the soda tax. This work contributes to the debate on how power is exercised, framed and shifted throughout the policy process (Cairney et al., 2012; Fuchs & Kalfagianni, 2009; Schmidt, 2008; Silverglade, 2010). It shows that Mexico (and Latin America) represents a market opportunity for transnational food corporations. It provides empirical research on how actors from the F&BI framed obesity as a personal lifestyle choice, influencing the public perception. This made it easier for companies to obtain public support for 'soft' policies aimed at informing and educating the consumer rather than changing the market environment. When the soda tax was introduced they were influential in responding to the potential threat, in negotiating mitigation measures with the government, while at the same time increasing their market share of bottled drinking water.

III. Reflections on the use of theory

This policy analysis was guided by carefully selected theories and frameworks. To identify all the relevant factors in the political analysis, the frameworks mentioned in Table 3.1 were used; and to formulate the research questions. The policy analysis explored the policy formulation, agenda setting and discussed evaluations of the impact of the soda tax. Kingdon's Multiple Streams Framework helped to identify the policy, the politics and the problems that collided in the 'policy window' when Enrique Peña Nieto became President, and considered the particular economic and political situation of the country. Key actors with high influence and power, such as legislators, were identified as policy entrepreneurs, as were some civil society groups supporting the tax and academics who joined in this supportive 'issue network'.

Framing is related to beliefs promoted and sustained to influence policymakers, under a context of uncertainty (Kingdon, 1995) as it was in Mexico with the changing government. As shown in this thesis, the soda tax was framed as a negative solution

to obesity but as a positive solution in terms of public finances and as an opportunistic move taken by the incoming government. However, framings that considered soda consumers as victims of the soda tax, were contradicted by framings that promoted drinking habits as a personal choice and the consumer's responsibility. These issues and negative framing of the soda tax evaluations played a key role in further framing the soda tax as ineffective, and as having negative impacts particularly for the poor.

The use of the policy network approach in this thesis helped to reflect on relationships and fluctuation of power among actors during the policy process. This approach also highlighted the relevance of coalition building between groups and the power of networks in success of the soda tax. This approach considers networks as a type of governance includes participation, responsiveness, and accountability (Lewis, 2006; Siddiqi et al., 2009; Tantivess & Walt, 2008). Participation of different stakeholders was exemplified by the rhetoric used by federal governments and other actors on the relevance of an inclusive and multi-stakeholder approach to the obesity policy. Responsiveness to the policy and accountability of the process were concepts not clearly reflected in the narratives, but were noted as elements of concern, when analysing linkages between stakeholders and the role the private sector played in the evaluation and monitoring of the obesity policy. Also, other examples included contrasting arguments about the formal representation of actors in the tables of discussion, the lack of indicators for the soda tax in the obesity's monitoring strategy, and the calls for transparency and accusations of conflicts of interest during the design of the ENCSOD.

Accountability involves one actor answering to the account holder, who will assess how well the former fulfils requirements to achieve specific goals (Swinburn et al., 2015). In this case, civil society has been the independent account holder towards the policy achievements. Despite this role, the F&BI was legitimised by Government throughout the process, and the conflict of interest between the industry's aims and the public health goals was overlooked by policymakers, while being pointed out publicly by civil society and other supporters of the tax.

Furthermore, the concentration of power remained in the corporate sector. The increasing PPP and SRA represented a 'horizontal cooperation' interaction between the F&BI and the government, where distribution of power was similar between actors (Adams, 2007, p. 135). Civil society and the legislative power had a similar cooperation. However, this was not the case for civil society's relationship with the federal government, which lacked interaction or was an 'asymmetric bargaining' interaction where the distribution of power had a hierarchical element, as the power remained in the dominant group (the government) (Adams, 2007, p. 135).

This research used several theories in a 'complementary approach', using multiple concepts or theories to produce a series of perspectives with which to explain empirical outcomes. The advantage of using several theories is to compare a range of perspectives, but recognising the different intellectual origins (Cairney, 2016, personal communication) (Cairney, 2013b). Combining several theories might imply a practical problem for the research design, however this was not the case for this thesis, as several theories were considered before selecting the ones that were used in this analysis.

This research provides evidence on how political science offers insights into the so-called political determinants of health and the constraints and forces that shape public policy (Huang et al., 2015). Though this case study is only about the soda tax, one of the many population approaches to tackle obesity, it provides insight of a novel approach to tackle obesity, and helps to find similarities or divergences amongst similar policy analyses whose focus was on other policies such as food labelling (Mwatsama, 2016; Wood, 2016), fat taxes (Bødker, Pisinger, Toft, & Jørgensen, 2015b), school food programs, and comprehensive policies to tackle obesity (Patchett, Yeatman, & Johnson, 2016; Pratt et al., 2014; Swinburn & Wood, 2013).

IV. Reflections on methods

Some challenges were faced and overcome during data collection and the elite interviews. They included the difficulties in recruiting a sample that represented all the key stakeholders such as refusal of some actors to participate, the long time it

took to make contact and secure the interviews, the challenge in some situations to differentiate and identify when interviewees were speaking on behalf of the organisation they represented or voicing their own opinions. There were also difficulties that are inherent in any qualitative interview study such as building rapport with the interviewees; and the influence of the location on the interview (Green & Thorogood, 2012a). To overcome some limitations of the interview study, a documentary analysis was conducted to validate information, and complement it when interviews were denied with key participants in the policy process.

To improve quality assurance and validity of data, the data from the different sources were triangulated. Also the themes and categories emerging during the analysis were reviewed and discussed with supervisors. To ensure research transparency and to acknowledge possible flaws during the research process, a list of techniques based on Guest, MacQueen and Namey was used (Chapter 3 page 80). This list helped me to consider the use of a systematic approach for both data collection and analysis (Chapter 3), to adequately describe the context (Chapter 4), to use relevant theory (Chapter 3), and reflect on the limitations of this study and to situate it in wider literature (this Chapter section 'Reflexivity and own experience') (Gilson & Raphaely, 2008).

V. Reflection on positionality

One of the main advantages for conducting this research was my previous position as a researcher, including the network built during that time, and facilitating access to interviewees and other actors involved in the process who supported my research by providing references to literature and useful documents. A second advantage was being a native speaker and a Mexican, as there were no cultural boundaries to establish rapport, and enable me to understand all interviews content and colloquial language. A third advantage was my training and experience doing research on the Mexican setting, especially on qualitative methodologies. A third advantage, was performing this research as a PhD student of a foreign institution (LSHTM), as it helped to access high-profile interviewees, as the school is well recognised in the area of public health in Mexico and some actors were sensitive to recognise my new position as an outsider of the process.

One negative aspect relate to my position before taking the PhD as some actors against the soda tax did not accepted the interview, and didn't perceived me differently from a supporter and advocate of the soda tax. Other negative aspect was that for the second half of the PhD (writing phase) I remained in London, which kept distance from the day to day continuing discussions about the soda tax and obesity polices.

Regardless of my previous and current position in relation to the topic of research, the acknowledgement of such positions provided awareness on the implications they had on the research process. As mentioned in chapter 3, the quality of the analysis depends on the skills, time, resources and knowledge of the researcher about the context, and those were considered throughout the fieldwork, discussion and conclusions of this research.

VI. Study limitations

One of the main limitations of this research is that it does not compare the soda tax in Mexico with the similar situation in other countries. At the time of the study design, few other countries had adopted a tax on sodas, and documenting their emerging cases was difficult due to language limitations. Further, the context of some of these countries such as (i.e., Hungary and France) was quite different compared to Mexico in a number of factors assumed relevant to the policy process, such as national economy, clean water availability, change of government, and poverty levels.

Some challenges during the interviews, included the lack of participation of some key actors, mainly from the F&BI but also some academics and a representative of the media (Table 3.6). Representatives of the F&BI members and the sugar industry either didn't reply or refused the invitation to participate. It was assumed that at that time (autumn 2014) the interview was probably perceived as a threat or a challenge as the soda tax policy discussions were still highly political. To overcome this limitation, the information from industry documents was used, and this

attempted to reduce as much as possible the gaps of information required to complete a comprehensive and weighted dataset for the analysis.

Some challenges in the documentary analysis were faced. Some of these included the extent of the information available and accessible. As mentioned in page 80, several search actions were employed to try to find it. If, by using any of those actions the source document was not found, it was accepted as a lost document. For example, several documents had been removed from the websites of key organisations at some point during the 4 years of research (e.g. AMPRAC, ContraPeso). Also, for some secondary documents there was a lack of control on how data was collected (in existing documents) especially in historic sources, so they are treated as accounts and the method was complemented with the interview data.

A further limitation is that the soda tax is a relatively recent health policy used by governments, especially in Mexico. This limits the research in taking a historical perspective or analysing the complete policy cycle. Nevertheless, some scholars value approaches to analyse contemporary cases to enlighten policymaking in a more efficient and immediate way (Buse, 2008; Gilson, 2008).

Finally, another limitation of this thesis is the exclusion of an originally planned comprehensive media analysis which was not pursued due to time constraints. Media coverage of the soda tax in Mexico was extensive, and a media analysis would have become a large research undertaking which was therefore not included in this research. To overcome this potential limitation, the documentary undertook a board search and included more than 100 documents to ensure a comprehensive understanding of the policy development.

VII. Study strengths

This thesis also had several strengths that are acknowledged here. First, the topicality of the thesis means that it is able to make an important contribution to the evidence base and contributes in a timely way to the international debate on the introduction of soda taxation in other counters, as a measure to control obesity.

Health taxes, and other similar strategies mentioned in chapter 2, are currently being discussed in many countries around the globe, and progress is being monitored by several groups (Hawkes, Jewell, & Allen, 2013; Swinburn et al., 2013). This thesis adds evidence for policy making around obesity, and to use this knowledge to inform further national soda taxation policies. Another strength of the thesis is that it used a rigorous methodology, and was conducted by a native speaker, with local knowledge and access, reaching an in-depth understanding of the policy process surrounding the soda tax in Mexico.

VIII. Proposed outputs and dissemination

Papers related to this work are yet to be published. Four papers are planned, one is already ready for submission. This work will have further dissemination as academic and policy papers to strengthen the impact, and to influence future research on this topic.

Table 9.1 Proposed papers as outcomes of the thesis with working title, aims and findings to be presented

Paper	Working title	Aim	Findings in chapters
Paper 1	Stakeholders' participation in the Mexican soda tax	Examine stakeholders' participation in the design and agenda setting of the soda tax and how it shaped policy outcomes.	Chapters 4, 7
Paper 2	Framing debates surrounding the design and agenda setting of the Mexican soda tax	Analysis of main frames used throughout the policy process of the soda tax implementation.	Chapter 6,
Paper 3	Policy networks contribution in defining and framing the Mexican soda tax and its impact	Map and identify policy networks in the soda tax policy process to identify influence, conflict of interest and power of the key policy players.	Chapters 5, 8
Paper 4	The governance of water access in Mexico and its relationship with the soda tax policy	To analyse the governance of water access and provision in Mexico during the implementation of the soda tax, and related to similar countries settings.	Chapters 3, 4, 8 and findings not presented in the thesis

IX. Reflections on findings

One of the main issues to reflect upon from this research was how a soda tax policy was adopted in Mexico despite the significant influence of the F&BI on the government. This thesis offers two possible explanations:

- a) Normative beliefs about 'punishing' the powerful corporate actors were addressed by the incoming government in the spirit of obtaining approval and support for wider fiscal reforms (Le Grand & New, 2015; Schneider & Ingram, 1993).
- b) The government was seen as focusing on obesity and diabetes as national health problems, despite needing money and portraying the fiscal policy agenda as positive, as it has been analysed in a global context (Thow et al., 2011).
- c) Strong leadership from civil society groups supporting the initiative.

Beliefs about the benefits of including the F&BI in the policymaking obscured the underlying conflict of interests of such participation. The presentation of selective facts and the 'institutionalization' of the narratives about multi-stakeholder arrangements biases judgments about such participation, which showed power imbalances.

The soda tax was an important commercial risk for the soft drink industry, as their corporate documents show (US SEC, 2012, 2013, 2014). However, while publicly the 'hard' policy was added to the agenda, the side agreements between the government and the F&BI were negotiated outside the public domain. Such addenda and other policy changes occurring simultaneously or immediately after the implementation of the tax, as food labelling changes or concessions for provision of drinking water in schools, mitigated the impact of the soda tax for the F&BI.

The lack of safe drinking water was a big political issue seen as being linked to the soda tax. The government committed to provide safe water fountains to all schools in the country, using soda tax revenues. Instead, the Minister of Education partnered with the F&BI to provide water to schools or communities thereby allowing the F&B industry to portray those actions as part of their corporate social responsibility actions to 'help' consumers, but actually helped them diversify their market to other regions, and changing their beverages portfolio to bottled water and non-caloric drinks (Farnsworth & Holden, 2006). Additionally, the normalization of links between actors that have competing fundamental aims towards health (F&BI vs MoH) risks jeopardizing the public health efforts of public health promoters.

Finally, a novel issue emerges from these findings. The relationship between soda and the lack of safe drinking water supplies in Mexico seems to be linked to soda overconsumption. However, this link was not well established by most of the actors interviewed, nor was it stressed in most of the documents reviewed. Only one actor recognised drinking water as a key factor related to obesity, malnutrition and poverty in Mexico, but this actor did not relate the water issue to the soda tax policy. The worst cases of obesity occur in the same places where the worst problems of under-nutrition occur, too. And it is where we have those problems, where we generally have the worst problem of access to water and poverty (Agua Org, 2016; AguaOrg, 2015b; Carriedo, 2017; "La crisis del agua de la Ciudad de México,").

Scholars have proposed that actions which include refinement of public information, use of effective frames for each population, media advocacy, building citizen engagement, and developing a receptive political environment and collaboration between stakeholders are relevant to increase popular demand for obesity-prevention policies (Huang, 2014). This thesis, demonstrate how some of the proposed factors identified as key to proceed with changes in the policy agenda, did influence the policy change. This thesis provides evidence on some of the reflections recently proposed by Escamilla, et al (2017) on this and other policies implemented in LA suggesting that some of the key elements for effective and sustainable policy, include 'evidence justifying policy; evidence-based advocacy by civil society; political will; and legislation and skilful negotiations across

government, academia, the private sector and civil society. Scientific evidence and evaluation played an important role in achieving tipping points for policies' launch and sustain effective implementation' (Perez-Escamilla, 2017).

X. Recommendations

Several recommendations emerge from the findings of this research. The Mexican regulations of water access needs further research concerning their function and transparency. The government issues special permits to corporations to extract potable water from springs, while, several urban areas have access to poor quality of water, and some rural areas lack the basic service of water regardless of their proximity to water springs.

Specific contextual factors should be considered whenever a health tax or a similar policy approach is being considered. First, this can be done by considering the determinants of obesity in that particular country or region. For instance, in this case, the companies producing soda and selling bottled water have governmental concessions for water springs. Therefore, besides their commercial interests in accessing water, they also have control over water access to the population.

Taxing soda for its sugar content might result in reformulation of sweetened beverages so that sugar content is reduced. However this may not address the problem of such drinks being 'empty calories' and thus a soda tax may not have a real impact on reducing the overall SSB consumption. This taxing scheme might obscure the purpose of the tax while giving leverage to F&B producers to accommodate new products that still have health implications.

Finally, reactions to regulations need to be carefully considered by activists, academics and other actors in favour of official measures and regulatory measures for health. As Caraher M & Cowburn, G (2015) suggest, public health advocates need to develop more skills as opponents such as the F&BI for the soda tax, use a range of arguments to prevent its implementation. Food and beverage taxation policies can have negative externalities in other policy areas which are directly or

indirectly linked to the same health issues (e.g. water, reformulation, social responsibility actions). This is an area of research that requires longer term evaluations of soda tax policies from all countries that have implemented them.

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Annex 1: Semi-structured interview guideline

Interview datasheet:
State
Locality.....Date...../...../201...
InstitutionAge.....Sex M F
Level of education.....
Occupation.....
Present position.....
Time in the institution.....

Instructions:

The researcher will introduced himself and will present the ID of the LSHTM. The researcher reads the Informed Consent Form approved by the LSHTM Ethics Committee. The interviewee will be informed about the goal of the interview and the need of recording for research purposes and confidentiality measures of the interview information. If participant withdraws his participation the fieldworker will stop the interview.

INTRODUCTION

1. To start, ask questions related to:
 - a. Please can you tell about your current job and position?
 - Length on the position
 - Previous job
 - Main activities

NUTRITION AND SOCIETY

2. About the topic of obesity/food and health, ask questions related to the following topics:
 - a. What do you think about obesity in Mexico?
 - b. Do you consider obesity and diabetes a public problem or not (rather a problem of each individual) and why.
 - c. Have you participated in the National Strategy for the Prevention and Control of Obesity developed by Peña Nieto government in 2013?
 - d. What do you think of the Strategy?
 - e. Do you know any other policy to prevent obesity in México? What do you think of them?
 - Food guidelines in schools? Marketing food to children? Health promotion in schools?
 - Advantages and disadvantages.
 - f. Have you engaged with any groups outside your organization on these topics in Mexico?
 - Civil society (who? And when?)
 - Media
 - Academia
 - Government
 - Food companies
 - Food retailers

FOOD LABELLING POLITICS

3. Ask questions related to the Front of Package Labelling:
 - a. Can you tell me what you know and think about Front of Pack labelling in Mexico?
 - Opinion
 - Knows the objective
 - Did any participants call you or ask your opinion as an expert?
 - Knows who participated in the design and implementation
 - Advantages and disadvantages perceived for: POPULATION, INDUSTRY, GOVERNMENT, INSTITUTION, RESEARCHERS. FOOD RETAILERS
 - b. Has your organization been involved with the FOPL design or implementation? How?
 - c. Do you think your organization is a powerful influence on this policy or not? Why?
 - d. Who else do you think has influence the FOPL regulation? Why and how?

- e. Do you know who supervise the compliance of the FOPL (the seal and the GDA)? (show package if needed)
 - Opinion of these institutions
 - Advantages and disadvantages
- f. What actions do you consider the government (or the responsible of the FOPL) needs to do/or change to be an effective strategy?

SODA TAX POLICY

4. Ask the following questions about the Soda Tax in Mexico?
 - a. Can you tell me what you know and think about the Soda Tax in Mexico?
 - b. Do you know why was it introduced?
 - Opinion
 - Knows the objective
 - Knows who participated in the design and implementation
 - Advantages, disadvantages and possible outcomes for: POPULATION, INDUSTRY, GOVERNMENT, INSTITUTION, RESEARCHERS, FOOD RETAILERS, NGOs who promoted it.
 - c. Do you know/ imagine/think where the resources are going?
 - d. Did any the participants call you or ask your opinion as an expert?
 - e. What has been the role of your organization?
 - f. Do you know about the constitutional right to access clean and drinking water? What are your views of this topic in relationship with the soda tax and the quality of water in Mexico?
 - g. In your opinion, what weights the most: the soda tax *per se* or the intense exposure of the topic on the media? What would you think will happen when the intense exposure decreases, but the soda tax remains?

POLICY PROCESS AND ACTORS INVOLVED

5. Ask the interviewee opinion about:
 - a. What is your opinion about the participation of food industry in the design and implementation of these policies?
 - b. What actions do you consider are needed for these policy to be effective?
 - Front of package labelling
 - Soda Tax

Annex 2: Ethics Committee Approval, Informed Consent and Participant Information Sheet

London School of Hygiene & Tropical Medicine
Keppel Street, London WC1E 7HT
United Kingdom
Switchboard: +44 (0)20 7636 8636
www.lshtm.ac.uk



Observational / Interventions Research Ethics Committee

Mrs. Ana Carriedo
Research Degree Student
PHP
LSHTM

29 August 2014

Dear Mrs. Carriedo,

Study Title: Food politics in Mexico: A policy analysis of the 2014 soda tax

LSHTM Ethics Ref: 8573

Thank you for your response of 28 August 2014, responding to the Observational Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

Approval is dependent on local ethical approval having been received, where relevant.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document Type	File Name	Date	Version
Protocol / Proposal	PROJECT FOOD POLITICS IN MEXICO ETHICS_C30_JUL_2014.docx	30/07/2014	1
Information Sheet	Participant_information_Sheet_V1_2_22_Aug_2014.docx	22/08/2014	1.2
Information Sheet	Informed consent V1_1_22_Aug_2014.docx	22/08/2014	1.1

After ethical review

Any subsequent changes to the application must be submitted to the Committee via an Amendment form on the ethics online applications website. The Principal Investigator is reminded that all studies are also required to notify the ethics committee of any serious adverse events which occur during the project via an Adverse Event form on the ethics online applications website. At the end of the study, please notify the committee via an End of Study form on the ethics online applications website. Ethics online applications website link: <http://leo.lshtm.ac.uk>

Yours sincerely,



Professor John DH Porter
Chair

ethics@lshtm.ac.uk
<http://www.lshtm.ac.uk/ethics/>

INFORMED CONSENT FORM

LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE

Full Title of Project:

Food politics in Mexico: A policy analysis of the 2014 soda tax

Name of Principal Investigator:

Ana Angela Carriedo Lutzenkirchen

Please
initial box

1. I confirm that I have read and understand the participant information sheet dated 22/08/2014 (Version 1.2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered fully.	
2. I understand that my participation is voluntary and I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.	
3. I agree for my quote or recording to be used in the publication or report released on the study.	
4. I understand that responsible individuals may look at the data collected during the study from the London School of Hygiene & Tropical Medicine, from regulatory authorities, where it is relevant to my taking part in this research. I give permission for these individuals to access my records.	
4. I agree to take part in the above study.	

_____ Name of Participant (printed)	_____ Signature/Thumbprint	_____ Date
---	-------------------------------	---------------

_____ Name of Person taking consent	_____ Signature	_____ Date
--	--------------------	---------------

_____ Principal Investigator	_____ Signature	_____ Date
---------------------------------	--------------------	---------------

The participant is unable to sign. As a witness, I confirm that all the information about the study was given and the participant consented to taking part.

_____ Name of Impartial Witness (if required)	_____ Signature	_____ Date
---	--------------------	---------------

1 copy for participant; 1 copy for Principal Investigator; 1 copy to be kept with hospital notes



PARTICIPANT INFORMATION SHEET

Food politics in Mexico: A policy analysis of the 2014 soda tax V.1.2 22/08/2014

You are being invited to take part in a research study. Before you decide to participate it is important for you to understand why the research is being undertaken and what it will involve. The main description of the purpose, participation and further information of the project are outlined below. Please take time to read the following information carefully and decide whether or not you wish to take part.

Please, ask me if there is anything that is unclear or if you would like more information.

What is the purpose of the study?

This study is being conducted as part of a PhD research project on Public Health and Policy at the London School of Hygiene & Tropical Medicine School, part of the University of London (United Kingdom).

The purpose of this study is to analyse the emergence and implementation of the soda tax in Mexico in 2014. This project will help the researcher and the academic community to understand the policy-making process around health policies, especially the ones related to obesity in the specific scenario of Mexico. It is also an opportunity for key stakeholders in the policy making, such as your organization, to articulate their views on the policy process and potentially influence the development of policy making in Mexico and other middle-income countries in the future.

Why have I been chosen?

As part of the research objectives, a set of interviews will be conducted with different respondents. You have been chosen since we considered your opinion and views will provide important insights into the process of the soda tax implemented in Mexico in 2014. As a key actor during this process your views will be of great importance for the analysis.

Do I have to take part?

No. It is up to you to decide whether or not to take part. If you do wish to participate, you will be given this information sheet to keep and will be asked to sign a consent form confirming you are happy to be interviewed. You are free to withdraw at any time and without giving reason.

What do I have to do?

Your participation consists in answering an interview, at your place of convenience. It could be either your office or any place without any loud noise and with privacy. It will take between 30 and 60 minutes. It is a one time meeting with the researcher. The researcher will ask your permission to record the interview for research purposes. The information shared during the interview will remain confidential and your name will not be disclosed in any research paper following the data analysis.

Expenses and payments

The researcher will meet you at a time and place of your convenience. No payment will be given for your participation.

What are the possible benefits of participating?

If you choose to participate in the study you will contribute to enhancing our current understanding of the health policy process in Mexico. In addition it will ensure the research is informed by a full range of stakeholder, representing different perspectives on both the policy process and the substantive issues of the soda tax and obesity policy.

Confidentiality

The information obtained during the interview will be considered confidential information and the identity of the participants will not be revealed except to the researcher, her 2 supervisors and, in limited cases, the members of the PhD committee, all of whom are academic staff at LSHTM. The results of the research will be presented in scholarly journals and at academic conferences, but always taking care not to reveal the identity of interviewees.

Contact information

If you need more information or any complaint about the project, do not hesitate to contact the research team Msc. Angela Carriedo, the main researcher of the project to the number: 044 55 54 54 81 42 or at the e-mail: ana.carriedo@lshtm.ac.uk or with Dr. Ben Hawkins, the academic supervisor of the researcher, based in London United Kingdom, either at the number: +44 (0) 2079272411, or at the e-mail ben.hawkings@lshtm.ac.uk

This study was given approval by the London School of Hygiene & Tropical Medicine Research Ethics Committee on ____29/08/2014____.

Thank you for considering taking the time to read this sheet.

“Desarrollo del Etiquetado Frontal de Alimentos en México. Evaluación de la estrategia de implementación.”

CARTA DE CONSENTIMIENTO INFORMADO PARA ENTREVISTAS CON ACTORES CLAVE EN LA IMPLEMENTACION DE ETIQUETADO FRONTAL DE ALIMENTOS

Estimado señor (a),

Como es de su conocimiento, actualmente en el país se observan alta prevalencia de sobrepeso y obesidad en la población, por tal motivo se han desarrollado diversas acciones para prevenir y combatir este problema. Sin embargo, aún se requiere realizar mayor investigación para conocer cómo influyen otros factores en este problema.

Como parte del Acuerdo Nacional para la Salud Alimentaria anunciado 2010 y ahora como parte de la Estrategia Nacional para la Prevención y Control del Sobrepeso, la Obesidad y la Diabetes anunciada en 2013, se propuso desarrollar una estrategia para implementar y evaluar un etiquetado frontal de alimentos que oriente a la población a consumir productos más saludable y tomar mejor decisiones, así como incentivar a la industria a propiciar productos más saludables. Como parte de esta propuesta el Instituto Nacional de Salud Pública continúa trabajando en evaluar y desarrollar el etiquetado frontal de alimentos.

El objetivo principal de esta investigación es documentar los factores políticos, sociales, legales y financieros que posibilitarán o limitarán la implementación de la Estrategia de Etiquetado Frontal de Alimentos en México en la Estrategia Nacional para Prevención y Control del Sobrepeso, Obesidad y Diabetes. Esta investigación ha sido aprobada por el Comité de Ética del Instituto Nacional de Salud Pública y además, cuenta con el apoyo de la Secretaría de Salud.

¿En que consistirá su participación?

El Dr. Barquera y su equipo de trabajo están solicitando su apoyo y su participación para realizar este trabajo y usted ha sido seleccionado porque es una persona cuya ocupación se relaciona con la producción, distribución de alimentos o bien con la investigación o documentación sobre los cambios.

Su participación consistirá en contestar una entrevista de aproximadamente 60 minutos que realizará el personal del INSP. Esta entrevista será para hablar de su experiencia y puntos de vista sobre el etiquetado frontal de alimentos y los cambios actuales en la regulación de alimentos que se relacionan a dicho etiquetado de alimentos con la implementación de la Estrategia Nacional para la Prevención y Control del Sobrepeso, la Obesidad y la Diabetes. Se incluirán preguntas sobre su opinión de esta estrategia, su participación y las acciones futuras desde su postura en estos cambios regulatorios.

Le comentamos que las personas que participen, **no recibirán dinero a cambio**, y no les costará nada participar. La información que proporcionen a esta investigación será de gran utilidad para generar evidencia que apoye a los y las tomadores de decisiones en torno al etiquetado frontal de alimentos y bebidas. Así mismo, le informamos que se mantendrá **absoluta confidencialidad** de toda la información que se genere, las únicas personas que

Número de registro ante la Comisión de Investigación del INSP:

tendrán acceso a esta información serán los investigadores. Los resultados se reportarán de manera global, de modo que no se identificarán los datos personales.

Riesgos

No existe ningún tipo de riesgo asociado a la participación en este estudio y su participación es absolutamente voluntaria. Usted es libre de negarse a participar o retirarse en cualquier momento.

Beneficios

Si usted está de acuerdo en participar en la realización de este estudio, usted estará ayudando al INSP a obtener información que ayude a prevenir y combatir el problema de sobrepeso y Obesidad, así como el de conocer sus opiniones. No existe beneficio alguno para su institución o para usted. Si usted decide no participar en el estudio, no habrá ninguna consecuencia negativa para usted ni para su institución de procedencia.

Confidencialidad / Anonimato

Para nosotros es importante proteger la confidencialidad de la información que se recabe de las y los que participan en este estudio. A continuación le indicaremos como lo haremos:

1. Los datos serán protegidos en las instalaciones del INSP y sólo estarán disponibles para los miembros del equipo de investigación.
2. Los resultados del estudio se presentarán en diversas publicaciones relacionadas con salud, en conferencias, pero siempre resguardando la identidad de las y los participantes.
3. La información que se obtenga de ningún modo será utilizada para evaluar su trabajo.

Contacto

Si usted acepta participar y requiere mayor información o tiene dudas sobre el estudio le dejaremos una tarjeta con los datos de contacto del investigador principal Dr. Simón Barquera y de la co-investigadora Ángela Carriedo, así como de la Presidente del Comité de ética del Instituto.

MUCHAS GRACIAS POR SU PARTICIPACION



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INSTITUTO NACIONAL DE SALUD PÚBLICA.

Título del proyecto: "Desarrollo del Etiquetado Frontal de Alimentos en México. Evaluación de la estrategia de implementación."

Agradecemos mucho su participación.

En caso de que usted tenga alguna duda, o comentario respecto al estudio, favor de comunicarse con el/la investigador(a) responsable del proyecto Dr. Simón Barquera o Mtra. Angela Carriedo, al teléfono: 01 (777) 3 29 30 00 extensión 4144 de lunes a viernes de 9:00 a 17:00 hrs.

Si usted tiene preguntas generales acerca de sus derechos como participante de un estudio de investigación, puede comunicarse con la Presidente del Comité de Ética en Investigación de este Instituto, Mtra. Angélica Ángeles Llerenas, al teléfono: 01 (777) 329-30-00 extensión 7424 de lunes a viernes de 8:00 a 16:00 hrs. o si prefiere puede usted escribirle a la siguiente dirección de correo: etica@insp.mx



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Fecha ____/____/____
 Día Mes Año

Av. Universidad # 655 Col. Santa María Ahuacatitlán; Cuernavaca Morelos, México.

Annex 3: Themes and codes used for analysis

Themes for analysis used for interviews and documentary analysis

To understand the contextual factors that facilitated the development of the soda tax

Barriers perceived of the context
Change of government
Environmental conditions
Fiscal reform
Government OR Institutional issues
Obesity increase
Opportunities perceived of the context
Social norms and perceptions (cultural factors)

To analyse the policy-making process surrounding the soda tax

Drivers for the policy change
Agenda setting and timing
Actions involved on shaping the policy design
Dialog and engagement of the actors
Means to evaluate, monitor and (or) modify the policy
Perceptions of the implementation
H2O issues

To examine stakeholders position and how each one attempted to influence the soda tax Implementation

Approaches to influence perception of the population
Credibility of the proposal
Dominant policy narratives
Engagement and involvement of stakeholders
Framing the policy
Framing the problem
Participation (actors beliefs and values)
Perception of the obesity policies
Power of the actors

To document the main policy outcomes of the stakeholders after the policy change

Acceptability of the policy change
Accountability after the soda tax
Changes made to overcome the outcome
coercive
conflict of interest
corruption
governance
Main outcomes of the soda tax
Regulatory, monitoring and voluntary actions emerging as collateral actions by different actors
right to health
social responsibility

Definition of themes and sub-themes identified in the documentary review

Theme	Sub-theme	Definition
Approaches to influence perception of the policy change		Refers to the arguments used by different actors to try to influence opinion. Could be used to influence consumers opinion, policy makers opinions or other actors such as academics or civil society members.
	Multicausality of obesity	It includes positioning the issue by itself or accompanied by other issues.
	Calls for action	This are the main strategies different actors have used to increase support to their own benefit. It includes calls for the government to regulate, public demonstrations (against/in
	Marketing strategies	Promotions, discounts, expanded publicity of products. Use of marketing to promote messages.
	International actions	some sources referee to what actions have been recommended or done internationally to credit or invalidate the policy change.
	consumption (both negative and positive)	This framing refers to positive and negative implications soda tax and how such perceptions were framed throughout time (before, during the debate and once the tax was
	Coalition building	Coalition building is one of the main strategies mentioned in literature and in our data as a strategy used by different actors to empower their position.
	Social responsibility	Emerging actions by different stakeholders throughout time are described as part of compromising themselves with a cause occurring at the time of the soda tax (either directly with obesity, soda consumption or other contextual factor such as water availability, drinking water, or environmental issues).
	Right to health and healthy environments	Arguments about the right to have access to healthy foods and limited access to unhealthy foods, the right to accurate information, health and water access.
Changes in law and reactions of actors		It includes the main foresight of different actors of the forthcoming policy changes or the current policy changes occurring in the country and how are they related to their own means and aims.
Credibility of the soda tax		All the expressions of the implications of the soda tax
	Credibility of stakeholder actions	Expressions on how believes what will work and how will work. This theme reveals the links and supporting actions between actors creating networks.
	Effective or Ineffective	Expressions about the effectiveness or ineffectiveness soda tax, the implications (before it was implemented) and its effects (after implementing it).
	Side effects	Highlighting other effects that the soda tax has, including adaptations of the SSB companies to the new context, changes in strategies and change of paradigms from the civil
Evidence and sources of credibility		Evidence seems to have competing arguments around the effective or ineffective role of soda tax, and to the type of reports presented publicly. The framing of certain documents highlight the position of the authors about the failure or success of the policy measure.
Ties between actors		This theme is to disclose how networks were built around actors who have played a role in the soda tax imitative.
	Civil society- Academics	All type of interactions between civil society members (alone or in group) to the academic groups (or individuals).
	Civil society- Food & Beverage industry	All type of interactions, collaborations and endorsements between civil society members and F&B industry members (or groups)
	Civil society- Government	All type of interactions, collaborations and endorsements between civil society members and Government members (or groups).
	Civil society- International agencies	All type of interactions, collaborations and endorsements between civil society members and international agencies.
	Civil society-Journalists/ Media	All type of interactions, collaborations and endorsements between civil society members and journalists or media (companies or individuals).
	Academia- Government	All type of interactions, collaborations and endorsements between academics and government members.
	Academia- Food & Beverage industry	All type of relationship between academics and members of the food and beverage industry or any of its endorsed front groups.
	Academia- Journalist/Media	Interactions or endorsement of journalists or media (or lack of it) with civil society members.
	Government-Food & Beverage	All type of interactions, collaborations and endorsements between the government (federal or legislative power) with food and beverage industry's members.
	Government- Journalist/Media	Interactions regarding soda tax issue between government members and media members or journalists in regards the soda tax.
	Journalists/Media- Food & Beverage industry	Interactions regarding soda tax issue between food and beverage industry's members and the media or journalists.
	Governmental relationships between powers (legislative and federal gov)	Looks at the dynamics between actors and sectors (legislative and federal) members before, during and after the soda tax passed.
Framing the problem		The main argument used to support the thesis about an issue and that has been identified as a public problem, according to Laswell policy cycle.
	Obesity in Mexico is a public Health problem	Public health is defined as "the science and art of preventing disease, prolonging life and promoting health through organized efforts and informed choices of society, organizations, public and private, communities and individuals". By framing obesity as a public health problem, obliges a response from all the mentioned sectors and people.
	Economic implications of obesity	Highlighting the economic impact of obesity is the most used narrative among academics and politicians, but is also used in some documentations of the private sector.
	Excess intake of calories & energy balance are the causes of obesity	Highlights the multifactorial causes of obesity, to avoid pointing out a single issue such as sugar or soda
	Soda consumption	Highlights the excess consumption of soda in Mexico, and as such the need to address it by the soda tax.
	Taxing SSBs	Highlights the implications and the problems emerging and related to taxing sodas.
	Sweetened Beverage Industry	Highlights how the main problem is related to the power and the position the soda industry has in the country.

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International Organisations		
Organisation	Background of the organisation	Involvement in the soda tax or/and related policies
Pan-American Health Organization (PAHO)	<p>PAHO serves as the specialized organisation for health of Inter-American Systems and is also the Regional Office for the Americas of the World Health Organization (PAHO, 2012). The area of Health Surveillance and Disease Prevention and Control has the mission to strengthen national capacities for Non-Communicable Diseases (NCD) prevention focusing on the high burden of diseases like cardiovascular diseases, cancer and diabetes and their risk factors like obesity and physical inactivity (PAHO, 2006, 2008).</p> <p>In 2011 a group of experts from different countries including Mexico developed a set of recommendations on food and beverage marketing to children supported by the PAHO (OPS, 2011).</p> <p>In 2016 they published the Nutrient Profile Model for the Region and have supported several countries to improve their policy of food labelling, school food programs and taxing sodas (PAHO, 2012).</p>	<p>PAHO collaborated in the fight of obesity in Mexico, as their own report mentions (PAHO, 2015) and as explained further in chapter 7. However, the PAHO Washington office publicly supported the tax before the PAHO's Mexican office (ITAM, 2012; Jacoby et al., 2012).</p> <p>In 2013, Dr. Maureen Birmingham was appointed as the new head of PAHO's Mexican office. Her first public appearance was as a guest at the presentation of the book on obesity edited by the National Academy of Medicine on January 31, 2013. At that occasion, she expressed her concerns about the Mexican strategies to address obesity and recommended to integrate efforts by different governmental institutions in the fight against obesity, to coordinate the regulation of marketing food to children and to implement strategies such as labeling to improve food literacy among the population (Jacoby et al., 2012; Rivera, 2013).</p>
Bloomberg Philanthropies (BP)	BP was founded by Mike Bloomberg, the former Mayor of New York City.	In Mexico, BP provided technical and financial support for 'an obesity prevention program' (BP,

The organisation focuses on five key areas of support: public health, environment, education, government innovation, and arts and culture. Their aim is to create lasting change, and spread effective programs, policies, and strategies to other jurisdictions. As per their website, the organisation ‘focuses on areas where the potential for controversy or failure keeps others at bay, and in particular areas where progress accelerates on a broad of issues’ (BP). The aim is to sway both public opinion and government officials in order to shift policies and advance progress. BP also supports public-private partnerships to bring people ideas and resources together globally to amplify their impact (BP).

2016), though there is no reference to the government’s obesity strategy. They supported advocating strategies for banning junk food and sugary drinks advertizing, taxing sugar-sweetened beverages, promoting healthy public sector policies, front-of-pack labelling and obesity prevention campaigns.

In the fall of 2013, BP civil society groups, think tanks and academics to propose a new tax on sugar-sweetened beverages, including funding media campaigns in support of the tax (BP).

The Bloomberg Philanthropies Obesity Prevention Program continues to work with public and private partners in Mexico to ensure that obesity prevention remains a topic of public discussion and policy focus (BP; Donaldson et al., 2015).

World Obesity Federation (WOF)

(formerly International Association for the Study of Obesity (IASO) / International Obesity Task Force (IOTF))

Professor Philip James originally convened the IOTF (International Obesity Task Force) in 1995 to prepare the first scientific research report on the global epidemic of obesity. The IOTF’s mission was to inform the world about the urgency of the problem of obesity and to persuade governments to act on time. It became the first policy and advocacy ‘think tank’ for obesity formed by a global network of experts on the topic of public health, policy and obesity. In the late nineties, it merged with the IASO

During the last decade, the IOTF has been monitoring the prevalence of overweight and obesity in different countries, Mexico being one of them. On a visit to Mexico in 2012, Philip James recognized Mexico as having a public health problem with obesity, and was surprised how food, beverages and pharmaceutical industries have major roles as sponsors of forums and conferences for topics such as obesity, diabetes, nutrition and NCDs. He pointed out that this is a sign of their power and influence in public policy, and urged the authorities to change regulations in order to have a real impact on obesity (EPC, 2012c; James, 2013).

(International Association of the Study of Obesity), formed in 1970 (IOTF, 2012).

In 2014, the IOFT changed its name to World Obesity Federation, which was part of a rebrand. As obesity became one of the biggest challenges, they recognized stronger actions needed to be taken. The mission was changed to 'lead and drive global efforts to reduce, prevent and treat obesity' ("World Obesity (formerly IASO) History ", 2016).

During the soda tax debate, as discussed in chapter 8, the IOTF signed press releases and journal columns in support of the soda tax, and later (in 2015) when congress voted on removing the tax, in support of keeping it (OMENT, 2015).

Inter-American Development Bank (IADB)

The IADB is the largest source of funding for the development of Latin-America and the Caribbean, supporting efforts to reduce poverty and inequality with the goal to achieve sustainable and climate-friendly development (BID, 2012a).

In 2008, IADB approved a conditional credit line and its first single operation was to support the human development program Oportunidades, in Mexico. In 2009 it approved a credit line to the country, with the objective to improve the nutritional component of the Oportunidades program addressed to the poorest population. It also had a component to address obesity and overweight among this population (BID, 2012b).

In 2010, the IADB authorized a loan of 600 billion MXP (31.5 billion USD) for the program *Agua Saneamiento e Higiene en la Educación Básica*. The program was expected to contribute to improving the availability of water for consumption and promoting hygiene. A fall by 30% of the prevalence of infectious diseases related to polluted drinking water was expected. The organisation also reported an increase of 5.3% in school attendance, reflecting an improvement in the incidence of childhood infectious diseases (BID, 2011). This loan did not address the problem of water availability inside schools and to date no further public reports are available about the loan or the program it aimed to help with (BID, 2011).

World Health Nutrition Association (WPHNA)	Public	The WPHNA aims to promote and improve public health nutrition and to be a 'professional voice for public health nutrition internationally' (WPHNA, 2015).	During the soda tax debate the WPHNA signed press releases and journal columns in support of the soda tax, and later (in 2015) when congress voted to remove the tax, in support of keeping it (OMENT, 2015).
Center for Science in the Public Interest (CSPI)	for	The CSPI is a non-profit organisation established in Washington D.C. It is a consumers' group who provides information about food policies and politics around them, and has provided support also to other countries' organisations in the fight against obesity from a policy perspective.	The CSPI supported the advocates for the sod tax by signing petitions and press releases of civil society organisations (CSOs) in the country. It also was invited to academic forums organized by CSOs.

Governmental Organisations		
Organisation	Background	Involvement in the soda tax or/and related policies
Ministry of Health (MoH) (<i>Secretaría de Salud - SSA</i>)	<p>In 2010, under the former president, the MoH with the advice of the National Institute of Public Health developed the first attempt to include obesity in the policy agenda.</p> <p>In 2010 the MoH and SEP developed the National School Food and Beverage Guidelines (Charvel, Cobo, & Hernández-Ávila, 2015). This regulation restricts availability of soft drinks; established guidelines on prepared food, cut points on sugars, fat, and sodium on food allowed inside schools, and distributed booklets and other educational materials to schools, parents and personnel in charge of food preparation and sales; which are part of the commission designed to monitor and supervise food availability in their schools (SSA, 2010).</p>	<p>In 2013, when Peña Nieto took office, the new Secretary of Health was assigned to develop the policy to prevent overweight and obesity (SSA, 2013a). The appointed Secretary of Health, Dr Mercedes Juan, was the former head of the Mexican Foundation for Health (Fundación Mexicana para la Salud - FUNSALUD) a civil society heavily funded by Nestlé (Fundación Mexicana para la Salud). The main actions and processes of such a strategy are described in chapter 7.</p>
Ministry of Economy (MoE) (<i>Secretaría de Economía - SE</i>)	<p>As part of the obesity policy launched in 2010, the MoE was task was to improve the food supply chains to facilitate access to fruit, vegetables, and whole grains (Rivera-Dommarco et al., 2013). Another of its tasks was to update regulations and support the MoH to issue a norm (NMX) on 'food labeling' to disseminate information on healthy products (SSA, 2010b). In</p>	<p>Regardless of being an entity which was perceived as a relevant actor for the obesity policy by academics (Hernández-Avila, 2013) and by the federal government in Calderon's mandate (ANSA, 2010), the MoE was not involved actively in the debate of the soda tax.</p>

2011 the norm NMX SSA-051 addressing this issue was modified, but it still left out important cut-off points for claims on front of the package, and did not provide the required nutritional facts to be disclosed for added sugar in processed products (Stern D, 2011).

In September 2010, when the Food Guidelines for Schools were submitted for public consultation to the Federal Commission of Improving Regulation) (Comisión Federal de Mejora Regulatoria COFEMER), the MoF was under pressure from the F&BI to change the original guidelines, as they were too strict. When the COFEMER published the guidelines they had weakened from the initial document submitted to public consultation. The criteria for energy dense foods was modified, fruit juices with added sugars were allowed in all primary and secondary schools and non-caloric sweeteners (called 'light products') were also permitted in secondary schools (Charvel et al., 2015; Pratt et al., 2014).

Ministry of Finance (MoF) (*Secretaría de Hacienda y Crédito Público - SHCP*)

The MoF has had an important role in reducing the consumption of food associated with cardiovascular diseases and improving diets by using fiscal policy. In 2010 during the previous presidential

When Enrique Peña Nieto took office, the MoF in collaboration with the MoH launched the new Fiscal Reform. More details are outlined in chapter 7 and 8.

administration they were to review fiscal tools to improve pricing of tasks of vegetables and fruits and increase taxes on sugary beverages and unhealthy foods, but there were no actions taken during Calderon's administration.

During the presidency transition in 2013, the MoF was in charge of developing the National Development Plan (*Plan Nacional de Desarrollo - PND*), the overall strategic plan of the new government. This plan addressed the topic of obesity.

Ministry of Public Education
(*Secretaría de Educación Pública - SEP*)

SEP has been an ally in the fight against obesity. In 2010 SEP and the MoH developed the National School Food and Beverage Guidelines (Charvel et al., 2015). This regulation restricts availability of soft drinks; established guidelines on prepared food, cut points on sugars, fat, and sodium on food allowed inside schools, and distributed booklets and other educational materials to schools, parents and personnel in charge of food preparation and sales; which are part of the commission designed to monitor and supervise food availability in their schools (SSA, 2010).

In 2014 under Pena Nieto's obesity strategy the food and physical

SEP was not involved in the soda tax debate. However, when the water fountains were to be installed, SEP launched the program called 'Escuela al Cien' and appointed a subsidiary of SEP called National Institute for the Educational Physical Infrastructure (*Instituto Nacional de la Infraestructura Fisca Educativa -INIFED*) to install all water fountains in schools. Details are explained in Chapter 8 (Inifed, 2015).

	activity guidelines were reviewed and re-established, but to date no evaluation on the achievements has been reported.	
Ministry of Social Development (<i>Secretaría de Desarrollo Social-SEDESOL</i>)	SEDESOL had specific responsibilities in the 2010 strategy to fight obesity. It was commissioned to restore public spaces, support infrastructure community projects and promote physical activity (SSA, 2010). In addition, SEDESOL was assigned to increase fruit and vegetables availability in the subsidiary government stores of Liconsa and Diconsa; whole milk was also replaced with skimmed milk. However, two years after these actions were implemented, an independent civil society group monitoring results showed that the only activity that was being implemented was the promotion of physical activity in workplaces (EPC, 2012a). The SEDESOL secretary's sister had a high-level position in PepsiCo and they were in charge of providing the subsidized foods (industrialized products high in sugar, salt and fat) to the 'Cruzada contra el Hambre' program (ref).	During the presidency of Enrique Peña Nieto, SEDESOL changed the largest program to reduce poverty, from <i>Oportunidades</i> to <i>Prospera</i> . This program provided fortified food to children and pregnant women, health and education. In addition, in January 2013 a new program was established called 'Cruzada Contra el Hambre' to follow the United Nations Programme 'Zero Hunger'. Its aim was to alleviate the causes of extreme poverty and food insecurity with a comprehensive approach that addresses all dimensions of welfare actions (SEDESOL, 2016). When the program started several concerns were raised about a biased selection of target communities, as they were located in states with governors from the ruling party, and not the poorer communities and states (Villamil, 2013).
Federal Commission to Protect Against Sanitary Risks	COFEPRIS is a decentralized and autonomous governmental entity, with	In 2012 when Peña Nieto won the elections, COFEPRIS was in charge of the MoH workshops organized as part of the

(Comisión Federal para la Protección contra Riesgos Sanitarios - COFEPRIS)

a federal commissioner appointed by the President. The institution is in charge of regulation, control and promotion of hygiene and health inspection. During Felipe Calderon's government (2006-2012) the *Acuerdo Nacional por la Salud Alimentaria* (ANSA – National Agreement for Healthy Eating) was agreed and COFEPRIS was responsible for certain activates (DOF, 2010). Frist COFEPRIS was appointed to perform the surveillance of each state's progress on sanitizing water for human consumption. Its actions also included informing local authorities about their surveillance and establishing campaigns to improve water usage inside homes. The aim for 2012 was to have 80% supervision of programs performed by each entity mainly in locations with low performance (SSA, 2010). There is no public document showing effectiveness of these activities.

With respect to the decrease in the consumption of sugar and fat in beverages, consumption of fat, trans fats, and sodium, COFEPRIS committed to very specific actions (SSA, 2010). These included the establishment of new norms to include nutrient profiling for the new front of package labelling,

consultation process. Then in 2013 it was in charged of the consultation meetings for the the regulatory sections of the obesity policy. These included the front-of –package food labelling, and regulations on marketing foods to children. Since then, COFEPRIS has been in charge of developing, monitoring and establishing criteria for the regulatory measures taken in the ENPCSOD.

It is not clear how much they comment on the soda tax regulatory measure, but they were a key actor for the whole process of the obesity strategy of Peña Nieto's government.

including sodium, sugar and fat cut-off points.

COFEPRIS was in charge of updating the regulation on food marketing to children. But in 2010, the former director of COFEPRIS launched a self-regulatory code agreed with the food industry called Código PABI instead of updating the regulation. One day after the code was launched it, he resigned (Theodore et al., 2016).

National Water Commission
(Comisión Nacional del Agua - CONAGUA)

CONAGUA is a decentralized and autonomous governmental entity, with a federal commissioner appointed by the President. One of several activities of CONAGUA is to provide availability and access to potable water for human consumption and to provide water to vulnerable populations. Felipe Calderon's presidency (2006-2012) aimed to increase the water supply to the population by 50%, as many communities were still lacking this service (CONAGUA, 2008).

In addition, CONAGUA is concerned with improving water quality, draining services and plumbing including *Programa Agua Limpia* (PAL) a program aimed at providing clean water (CONAGUA, 2007). Up until 2011 there was no public information about this program.

CONAGUA's activities during the soda tax implementation were mainly related to water access. As one of the aims of the government was to use the revenues from the tax for water provision, CONAGUA was a key intersectoral partner to work with. Therefore, their activities are mapped in this research.

Under Peña Nieto's government the law on water was changed and the PAL program modified to PROAGUA (Programa de Agua Potable, Alcantarillado y Saneamiento - Potable Water, Sewer and Sanitation Program). The main goal of the program is to support the state and municipal governments in achieving the needs of access to water for human consumption and hygiene in housing, in adequate quantity to the rural and urban population (Chávez-Zárate, 2016).

The only information publicly available until 2016 was an evaluation of its design, but no further information about its implementation.

		<p>However, according to CONEVAL, an agency dedicated to evaluate social programs, CONAGUA reported that the PAL program lacked an impact evaluation due to budget constraints. (CONEVAL, 2012).</p>	<p>In addition to these program changes, several amendments were introduced in the Ley General del Agua (General Water Law). Some of them are relevant to this project and are discussed in chapter 8.</p> <p>None of the actions reported on the documents referred to CONAGUA as a government organisation involved in installing or advocating for clean water at schools (with the revenues of the soda tax).</p>
Senate (<i>Senado de la Republica</i>)		The upper house of the Congress, the legislative branch of the Mexican government.	A group of senators were the 'policy entrepreneurs' first proposing the soda tax in 2012. One senator was particularly involved in the policy process (described in chapter 7).
Chamber of Deputies (<i>Camara de Diputados</i>)		The lower house of the Congress, the legislative branch of the Mexican government.	The Chamber of Deputies voted on the soda tax legislative initiative first proposed and also added the snack tax to the legislative proposal when voting on the Fiscal Reform.
Instituto Nacional de la Infraestructura Física Educativa (National Institute of Education Physical Activity Infrastructure - INIFED)		The institute is part of the Ministry of Education and is in charge of improving the buildings, gardens and installations of public schools in the country.	They were commissioned to install water fountains in primary schools just after the soda tax was implemented. Some of the regional offices partnered with Coca-Cola Foundation to do so.
Civil Society Organisations and Think Tanks			
Organisation	Background	Involvement in the soda tax or/and related policies	
Mexican Diabetes Association (<i>Asociación Mexicana de Diabetes- AMD</i>)	The Mexican Diabetes Association engages in different activities supporting diabetics and their families, including education on healthy	The Mexican Diabetes Association is one of the institutions which supported the soda tax when it was first presented in the Senate (AMD, 2012).	

	<p>eating, nutrition and tools to improve health literacy.</p> <p>In 2015, they partnered with the Coca Cola Company to host a symposium on physical activity, as described in Chapter 5.</p>	<p>They supported the initiative with the argument that the strategy will support the 10 million Mexicans with diabetes, the 10 million people who are pre-diabetic, and the children who already present risk factors for obesity, compromising their future (PRD, 2012).</p>
<p>Mexican Diabetes Federation (<i>Federación Mexicana de Diabetes - FMD</i>)</p>	<p>The Mexican Diabetes Federation aims to help and support people who are suffering from diabetes. It has associations in different locations around the country where assistance is offered to patients and their families. They also help with training professionals, family members and improve public awareness on the subject. The aim is to reduce the early signs and symptoms of diabetes and improve lifestyle changes. They also endorse products to guide consumers in eating non-caloric sugary processed foods (FMD, 2016).</p> <p>In 2014 links between CONACYT, the FMD and Coca-Cola became evident by supporting the Instituto de Bebidas para la Salud y el Bienestar (IBSB) an organisation sponsored by The Coca-Cola company as a means to achieve social responsibility actions. In 2015, a book called 'Hidratación. Fundamentos en las diferentes etapas de la vida' published by the</p>	<p>The Mexican Diabetes Federation remained silent during the soda tax debate.</p>

IBSB was endorsed by the FMD and by other civil society groups, such as the Asociación Mexicana de Nutriología (AMENAC); and by four international organizations: Federación Iberoamericana de Nutrición (FINUT), Federación para la Investigación Nutricional (FIN), Grupo Latinoamericano de Nutrición Comunitaria, Fundación Española de la Nutrición (FEN). The book targets professionals and provides information on how to improve hydration and the relevance of choosing better our sources and that 'better adapt to our lifestyle and needs' (Coca-Cola Mexico, 2015a).

Mexican Foundation for Health
(Fundación Mexicana para la Salud - FUNSALUD)

FUNSALUD is a private institution and a civil society organisation whose aim is to contribute to science, technological, and health policy knowledge.

Since 1992, FUNSALUD has received funds from Nestlé (Fondo Nestlé Nutrición) for different activities.

In 2012 the conducted research on obesity, mainly focused on promoting physical activity in schools, nutrigenomics and variations in genes associated with obesity. In addition, they conducted research on the impact of the

Dr. Mercedes Juan, was the Executive President of FUNSALUD until December 2012, and she was appointed as Secretary of Health in 2013. It was under her leadership that the strategy against obesity, the ENPCSOD, became effective. She didn't have a strong position on the soda tax when first proposed by the Senate, and later by the MoF, as discussed in detail in chapter 7. However, she maintained it was being effective in reducing soda consumption in 2014. After the first discussions of the impact of the soda tax became public in 2015, and concerns about conflict of interests in the MoH were raised by civil society, she was replaced by Dr. José Narro, former head of the UNAM (Universidad Autónoma de México – Mexican Autonomy University).

implementation of the 2010's School Food Guidelines on the nutritional status of children (Zárate, 2016). According to their results, prepared food was the most consumed and it contained a significant amount of energy and fat. Their conclusion states that although the regulations inside schools are being implemented, the recommendations have not yet reached the food children bring from home, with only 1 of 4 are compliant with the energy recommendations. Almost half of all schools had no potable water available (Funsalud, 2012).

In their report of activities and plans for 2013, FUNSALUD planned to create a group to follow up the actions and policies to tackle the childhood obesity problem. In November 2012, they called for a meeting to coordinate three different work teams, each assigned to develop proposals to increase physical activity and create healthier diets among the population, although no further information could be found on the progress of such project.

Midete
Foundation
(*Fundación
Mídete – FM*)

Fundación Mídete is a civil society organisation promoting the creation of strategies for the prevention and treatment of obesity and overweightness. It also

On the 5th of December 2012^h, Fundación Mídete, with support of the 31 members of the Alianza por la Salud Alimentaria, and with the support of eight Senators and 37 Deputies, presented to the Congress the

promotes civil initiatives with legislators and different actors of the government, as well as programs and campaigns to promote healthy lifestyles. The foundation develops proposals, information, surveys and statistical data for legislative changes to control and address the obesity problem in Mexico (Mídete, 2012).

This organisation is part of the Alianza por la salud Alimentaria (Alianza por la Salud Alimentaria, 2012c; Contrapeso, 2012c).

soda tax legislative initiative (Mídete, 2012). Thereafter, the foundation has been actively involved in the public debate on the initiative and by making public declarations about the need for novel integrated and multi-sectorial policies (Diaz, 2013).

Strategic Platform against Overweight and Obesity (*Plataforma Estratégica contra el Sobrepeso y la Obesidad - ContraPESO*)

ContraPESO is the strategic platform of a consortium of civil society organisations, created to influence public policies that will provide a solution to the obesity epidemic in Mexico (Contrapeso, 2012b). The organisations participating in this platform are: Alimento para todos, Amistad, desarrollo y cooperación (ADECO), Anima Naturalis, Asociación Mexicana de la Cruz Blanca Neutral, Asociación Mexicana de Diabetes, Asociación Mexicana de familiares y pacientes con artritis reumatoide A.C., Asociación Mexicana de fibrosis quística A.C., Asociación Mexicana de Leucemia y Gist, Asociación Mexicana de Lucha, Contra el Cáncer

On the 28th of September 2012, the first meeting to define the ContraPESO's guidelines against obesity was held in the presence of Dr. Enrique Gil Bellorin, Advisor of Chronic Diseases at the Pan American Health Organization (PAHO). The main strategies presented in this meeting included: to reduce soda and sweetened beverage consumption, to modify the GDA (guidelines daily amounts) currently used by the industry, to include nutrition education in both private and public school curricula, to improve marketing bans for junk food, to guarantee access to healthy and nutritional foods to all consumers; and to increase time assigned inside schools for physical activity, and improving non-motorized transport (Contrapeso, 2012c).

A.C. Asociación Nacional de Síndrome de Williams A.C., Fundación InterAmericana del Corazón México, Fundación Mexicana del Riñón A.C., Asociación Renal Venados, Asociación de Salud y Bienestar Social, Colegio Mexicano de Bariatría, Comité de Derecho Humanos Ajusco, Fundación Cimab, Fundación Mídete, Huellas de Futuro, The Hunger Project México, Instituto de Políticas para el Transporte y el Desarrollo, Organismo de Nutrición Infantil, Organización Smiles, Pida, Pueblo Biciletero.org, Red por la Salud, Red Mundial Suicidiólogos, Respirando con valor, Reto, Sociedad Mexicana de la Salud Pública, Unidos, World Diabetes Foundation (Contrapeso, 2012a).

Aliance for
Healthy Eating
(*Alianza por la
Salud
Alimentaria* –
APSA)

APSA is a network of civil society organisations, social organisations, professionals and researchers from different academic institutions concerned with the epidemic of overweightness and obesity, as well as the prevailing problem of under-nutrition in the poorest communities, and the risk factors associated with these problems. The group's main demands to the executive and legislative powers are to develop and implement integral public policies

The main strategies proposed by APSA to achieve its aims are: to provide healthy foods in schools, to forbid marketing to children of high energy, salt, fat and sweetened foods, to implement a food labeling system in food and beverages, to provide access to potable water, to attend to the food security problem, to tax sodas and sweetened beverages; and to promote breastfeeding and traditional diets (Alianza por la Salud Alimentaria, 2012b, 2012c).

On 5 December 2012, APSA as well as other organisations such as El Poder del Consumidor, La Red por los Derechos de la

aimed at tackling obesity and diminishing the under-nutrition in rural and indigenous populations.

This network includes participation of some members of the academia from different institutions such as: Universidad Autónoma Metropolitana, Universidad Autónoma de Ciudad Juárez, Universidad Autónoma de México, and Universidad Mexicana del Norte.

The organisations involved in the alliance are: Al consumidor, Asociación Nacional de Empresas Comercializadoras de Productores del Campo (ANEC), CCESC_DDS, Centro de Orientación Alimentaria, coalición de Organizaciones Mexicanas por el Derecho al Agua (COMDA), Consejo Nacional de Organizaciones Campesinas (CONOC), ContraPESO, El Barzón, El Poder del Consumidor, Foodfirst Information and Action Network (FIAN MEXICO), Food and Water Watch, Fundación Mídete, Greenpeace, Grupo de estudios Ambientales, International Baby Food Action Network (IBFAN México), Oxfam México, Proyecto Planeta Azul, Redim, and Semillas de Vida, Sin Maíz no Hay País (Alianza por la Salud Alimentaria, 2012a).

Infancia and la Asociación Nacional de Empresas Comercializadoras de Productos del Campo, endorsed the 20% soda tax submitted to the congress by senator Mario Delgado and Senator Marcela Torres. As per the proposal, the purpose of this tax was to fund a national program to introduce potable water to schools and public spaces in the poorest communities of the country (Rivera, 2013).

<p>The Consumer's Power (<i>El Poder del Consumidor-EPC</i>)</p>	<p>EPC is a civil society organisation whose mission is to promote and defend the rights of consumers, to recognise new rights that are not necessarily the law and to support the right of consumers to have access to public goods. It was established in 2006 with the aim of influencing public policies and corporate practices in favour of consumers.</p>	<p>They played a key role in the soda tax debate, which is described in detail in chapters 7 and 8 (EPC, 2016).</p>
<p>Aspen Institute</p>	<p>The Aspen Institute was founded in the USA in 1950 by Chicago businessman Walter Paepcke. It is an educational and policy studies organisation based in Washington, DC. Its mission is to foster leadership based on enduring values and to provide a nonpartisan venue for dealing with critical issues. The Institute has campuses in Aspen, Colorado, and on the Wye River on Maryland's Eastern Shore. It also maintains offices in New York City and has an international network of partners (The Aspen Institute).</p>	<p>The Aspen Institute was appointed by the Ministry of Health as a partner on the multi-stakeholder platform to evaluate and to design the indicators of the national obesity strategy (OMENT, 2014). It also partnered with the think tank IMCO, to develop the soda tax indicators. These were not published by mid-2016 which was confirmed by personal communication (Personal Communication, IMCO member, May 2016).</p>
	<p>The institute provides regular seminars, policy programs, conferences,</p>	

and leadership development initiatives. The Aspen Institute is largely funded by foundations such as the Carnegie Corporation, the Rockefeller Brothers Fund, the Gates Foundation, the Lumina Foundation, and the Ford Foundation, by seminar fees, and by individual donations. Its board of trustees includes leaders from politics, government, business and academia who also contribute to its support.

In March 2014 the Aspen Institute Mexico was launched. The director appointed was Juan Ramon de La Fuente, the previous dean of the most important public university in Mexico UNAM (Universidad Autónoma de México) (The Aspen Institute, 2014).

Several members of the executive board might have a conflict of interests when it comes to the Aspen Institute's resolutions on obesity policy. Some of the members include the chief of Coca-Cola Mexico, the dean of ITAM a well-known private university, and the vice-president of Walmart. Also one of the consultants is Jaime Zabloudovsky, former head of ConMexcio (The Aspen Institute).

In 2013 the Aspen Institute launched a program called 'Project Play' to promote physical activity with a multi-stakeholder approach including industry, government and philanthropic organisations. The program was expanded to other countries such as Mexico (The Aspen Institute, 2014).

Mexican Institute for Competitiveness (*Instituto Mexicano para la Competitividad - IMCO*)

IMCO is a non-profit, research centre, and a think tank. Its mission is to influence public policies and design actions to influence their execution, 'to improve the challenges that Mexico is going through' (IMCO, 2016).

The group has a member of CIDE (Centro de Investigación y Docencia Económicas) on its executive board. Also on the board are president and director of Grupo Bimbo, the largest packaged food producer in Mexico with 11.4% of the market share (Euromonitor, 2016), Jaime Zabłudovsky head of CONMEXICO a, the director of CONACYT (Consejo Nacional de Ciencia y Tecnología - National Council of Science and Technology), and the Head of the CEE (Consejo Coordinador Empresarial - Business Coordinating Council)(IMCO, 2016).

IMCO first started to be involved in the Strategy for obesity in 2014, when they were contracted both by the Ministry of Health and by the National Institute of Public Health (INSP). The MoH retained them as consultants to design the indicators and strategies to be presented in detail in the National Strategy and for the OMENT, in partnership with the Aspen Institute and the Universidad Autónoma de Nuevo León. In parallel, they contracted with the INSP to map the policies selected in the Strategy and compare them to the benchmark indicators produced by the Cancer Research Institute. The latter resulted in the publication 'Kilos de mas, pesos de menos: los costos de la obesidad' (More kilos, less pesos: the costs of obesity) published in 2015 (IMCO, 2015a). This study estimates the social costs of obesity, includes expenditure on medical treatment and productivity losses due to premature mortality and work absenteeism. It also reviews the public policies that have been adopted in the face of this problem and compares its design

		with international benchmarks, providing a number of recommendations (IMCO, 2015a)
Polithink	<p>Polithink is an organisation specialized in advocacy. They use lobbying strategies, with strategic communication, information management and political networking.</p> <p>It is integrated of a multidisciplinary team with academic, political knowledge.</p> <p>They work with civil society organisations, mainly in public health. They have participated in advocacy for the prevention of obesity and smoking.</p>	<p>During the soda tax debate they were highly involved. They supported the first legislative initiative with the Senator proposing the tax. Their participation is described in Chapter 6, 7, 8.</p>
Private Sector		
Organisation	Background	Involvement in the soda tax or/and related policies
<p>National Association of Producers of Soft Drinks and Carbonated Water (Asociación Nacional de Productores de Refrescos y Aguas Carbonatadas - ANPRAC)</p>	<p>ANPRAC was founded in 1945 and represents the Mexican soft drink industry, with 99 associates. Their goal is to 'represent the Mexican soft drink industry in defending the common interests of its members, safeguarding their reputation and their products in order to boost their development and growth' (ANPRAC, 2016a).</p> <p>The association became very active when a soda tax was included in the plans of the new administration. When the soda tax initiative was presented to the Senate,</p>	<p>ANPRAC constantly modified their website during the time of this research, and several publicly available reports on soda consumption in Mexico, which were available to the public in the past, have been removed.</p> <p>In 2015, a year after implementation of the soda tax, they funded a report on the consequences and impact of the tax, which criticized the strategy. The sources of funding were published in the press, resulting in suspicions of bias in the report (Cherukupalli, 2016).</p>

	ANPRAC released public communications opposing the soda tax initiative.	
Mexican Council of the Consumer Products Industry (<i>Consejo Mexicano de la Industria del Consumo-CONMEXICO</i>)	CONMEXICO is a group that brings together 43 leading companies in the markets of food and beverages, alcoholic beverages and personal care products in Mexico. Their mission is to 'increase efficiency and competitiveness of all links in the business chain, from the production line to the point of sale, to put on the market in a timely manner, a wide range of products that meet the needs and lifestyles of Mexican consumers' (CONMEXICO, 2013). Their activities include 'influencing the design and execution of public and private policies' and 'providing technical and/or scientific support, to promote a sound institutional environment'. As per its website CONMEXICO also 'promote a certain regulatory framework' in order to promote investment and 'allow the healthy development of the industry of consumer goods' (CONMEXICO, 2013).	CONMEXICO has been active before, during and after the soda tax was approved. The group published several press releases and declarations surrounding the fiscal changes to high-calorie and soda taxes in Mexico. It played an active role in the consultation process of the MoH's policies and as consultant for the OMENT. These activities are described in detail in chapter 7 and 8.
Confederation of Industry Chambers (<i>Confederación de la Cámara de Industriales - CONCAMIN</i>)	CONCAMIN is a group representing all of the Mexican industry of goods and services. It is a collection of 46 national chambers, 14 regional chambers, 3 generic chambers and 44 associations of different producers in Mexico. Its	During the soda tax discussion CONCAMIN made several publications rejecting such a tax, and supported CONMEXICO's and ANPRAC's position.

objective is to promote and defend the industry's interests. Its mission, as stated on their website, is to represent the interests of the industrial sector in Mexico and give guidance on efficiency, competitiveness and economic interest in productive chains. In the opinion of Francisco Funtanet Manget, president of Concamin, sodas and industrialized food are being stigmatized giving them 'attributes that they don't have' in relation to the obesity epidemic (CONCAMIN, 2016; Reforma, 2013).

Sugar Cane Producers' Union (*Unión Nacional de Cañeros- UNC*)

In the second half of 2012, the price of sugar cane produced in Mexico decreased sharply, although the prices of foods using sugar such as sweetened bread, cookies and soda increased by 11.6%, 4.2% and 3.4% respectively. The main reason for this price fall was an increase of international imports due the policies approved by the Ministry of Economy in 2012. This situation had implications in 2013, as national producers protested by closing 54 centers of sugar production. During the second half of that same year, the Ministry of Agriculture in coordination with the Ministry of the Economy, development banks and the sugar cane industry agreed certain actions to

Mexican sugar producers disapproved of the soda tax and campaigned against it. When the soda tax discussion started, the sugar cane producers were seeking allies to promote an economic policy to control the increase of foreign sugar in Mexican products (Personal Communication, (ITAM, 2012).

improve the productive chain of sugar cane and to end public demonstrations and closure of factories. Banks were encouraged to fund the industry to cover their needs in terms of the work force and pay them on time (Reforma, 2013). However, the national usage of sugar has remained stable, and in the past few years there has been an important increase of imported corn syrup.

Coca-Cola FEMSA

Coca-Cola FEMSA is the largest soda producer in Mexico and Latin America. It joined the Coca Cola Company in 1991. Coca Cola FEMSA started by owning 51% of the stock of soda in Mexico, though to date it only owns 27.4% and Coca Cola Company the rest. It is the main producer of the Coca-Cola in the region along with Arca Continental. It started to grow acquiring bottlers in Central America, Colombia, Venezuela and Brazil (Coca-Cola FEMSA, 2015a). The former president Vicente Fox (2002-2006) was a former CEO of the company, and he worked there since 1964. During his presidency the company expanded in the country, and was granted water wells in the area of Chiapas (Nash, 2007).

Coca-Cola FEMSA has been a major player in the soda tax debate. It made a number of arguments, executed multiple actions, and engaged in sponsorships and partnerships. The actions and their influence on the national context are described in Chapters 6,7 8..

Coca-Cola Foundation

The foundation was established in 1997, with

Together with the MoH and the Foudntation Movmenet is Health

	<p>the mission of ‘contribute with healthy and sustainable development of communities. Their aim is to join efforts with civil society, academics and government (what they call the “gold Triangle”) to improve the leaving of the Mexican communities. According to their webpage they are recognized by the government as an important actor’ to work together for the community (Fundación Coca-Cola).</p>	<p>(Fundación Movimiento es Salud) they have a program called ‘get to 100’ (Ponte al 100) to provide people with healthy eating and physical activity. This program started simultaneously with the new government. The main aim of the program to promote health, its conflicting with the main aim of the commercial interests of the company.</p> <p>The same year the Coca Cola Foundation in collaboration with another civil society called Healthy Schools (Escuelas Saludables) provides maintenance and access to drinking water to schools. IN 2014 they installed 1, 447 water fountains in public primary schools mainly in rural areas, and in low income communities.</p>
ARCA Continental	<p>Arca Continental is a Mexican beverage manufacturer and distributor. It manufactures soft drinks of brands owned or licensed by the Coca-Cola Company in Northern and Western Mexico, Ecuador, Peru and Argentina. It is the second-largest Coca-Cola bottler in Latin America and the third largest in the worlds (Arca, 2016).</p>	<p>As a major producer of sodas and sugary drinks in general, PepsiCo are part of ANPRAC and CONMEXICO, and who were involved in the debate on the soda tax, as explained in chapter.</p>
PepsiCo	<p>PepsiCo is a global leader in foods and beverages who is increasingly producing ultra-processed products including Frito-Lay, Gatorade, Pepsi-Cola, Quaker and Tropicana with revenues of more than \$63 billion in 2015. In Mexico, they have been on the processed food</p>	<p>Also, as a major producer of sodas and sugary drinks in general, PepsiCo are part of ANPRAC and CONMEXICO, and who were involved in the debate on the soda tax, as explained in chapter 7.</p>

market for more than 100 years, with brands like Quaker, Gamesa, Sabritas, Gatorade and Sonric's. The market share of sweetened beverages in Mexico for PepsiCo is 6.5%. Coca-Cola leads the Mexican soft drinks market with 27.4 % in 2015, followed some way behind by Pepsi-Cola Mexicana with 6.5% in second place and Danone de México with 6.5% in third. For packaged food PepsiCo held the second largest market share with 6.4% in 2015 just after Bimbo S.A. de C.V. (Euromonitor, 2016).

PepsiCo's corporate vision is 'Performance with sense'. This refers to achieving long-term financial performance by integrating sustainability in their production. The company engage in three main activities to achieve this target: 'to focus on reformulation products, on the planet and on the people' (PepsiCo, 2016).

PepsiCo Foundation

The PepsiCo Foundation is the philanthropic arm of PepsiCo, responsible for providing charitable contributions to non-profit organisations. The Foundation is in charged to development partnerships to implement sustainable programs in marginalized regions to improve health, the environment and education. The foundation

In 2011 the he Inter-American Development Bank (IDB), PepsiCo, and the PepsiCo Foundation stated a five-year public-private partnership (PPP) to achieve universal and equitable access to safe water for people living in rural communities, focusing on benefiting women and girls in all Latinamerican region.

	<p>aim is to improve development in all communities and improve sustainability.</p> <p>They are partners of the National Commission for the Development of Indigenous Peoples (CDI), the Union of Entrepreneurs for Technology in Education (UNETE), the Mexican Foundation for Rural Development AC the Mexican Association of Food Banks (AMBA), Un Kilo de Ayuda (UKA), the Community Foundation of the Northern Border, the United Nations Children's Fund (UNICEF) and Save the Children (PepsiCo, 2016).</p>	<p>In 2016 they renewed this PPP to continue to work in providing access to drinking water to communities(PepsiCo Foundation, 2016) .</p>
<p>National Chamber of the Sugar and Alcohol Industry (<i>Cámara Nacional de la Industria Azucarera y Alcohólica - CNIAA</i>)</p>	<p>CNIAA was established in 1942 and originally represented 51 sugar mills located in 9 Mexican states. In 2015 it represented 36 of the 54 national mills, located in 15 states. Its aim is to represent the interests of the sugar and alcohol industries to the authorities, both in Mexico and abroad. According to the Sugar Cane Sustainable Development Act, it represents the interests of all the mills in the country. This group is a member of the Board of Directors of the National Committee for the Sustainable Development of Sugar Cane, working with the congress, the federal government and</p>	<p>CNIAA participated in the sugar tax discussion from the beginning. The head of the group talked in several academic discussions, and in the media. CNIAA sponsored a marketing campaign to promote sugar consumption during the public debate and engaged in other activities as described in Chapters 7 and 8.</p>

with the states' authorities (CNIAA, 2016).

Academia		
Organisation	Background	Involvement in the soda tax or/and related policies
Mexican National Academy of Medicine (<i>Academia Nacional de Medicina de México - ANMM</i>)	ANMM was established 150 years ago, and it is the most recognized group of medicine in Mexico. It was one of the institutions that supported the Food Guidelines on Schools when they were submitted to COFEMER.	Presentation and edition of the book on obesity with recommendations for a policy actions to tackle this epidemic, presenting the aetiology of obesity, and the main direct, underlying and basic causes of this problem. The content and suggestions of the ANMM were presented in this book and were used repeatedly in forums and discussions for the soda tax and other policies. It presented Mexico's situation in relation to obesity, and made a number of suggestions to improve public policies tackling obesity and diabetes. This book was addressed as the white paper for the soda tax policy. (Rivera-Dommarco et al., 2013; Rivera, 2013).
National Institute of Public Health (<i>Instituto Nacional de Salud Pública - INSP</i>)	The National Institute of Public Health was founded 30 years ago, and has contributed greatly to public health and health policy in Mexico. It is the institute in charge of conducting the National Nutrition and Health surveys every 4 years. It also conducts research in epidemiology of cancer and tobacco use, reproductive and environmental health, vector control and infectious diseases, nutrition, program evaluation and development, among other areas. It is a decentralized institution	The institute has been very active in providing information and research on the soda tax in the past few years. Its members have stressed the benefits of taxing soda and foods. Details of the role of the INSP are discussed in Chapters 5, 6, 7.

		<p>of the federal government. Its mission is ‘to contribute to social equality and the full realization of the right to health through the generation and dissemination of knowledge, training of human resources and innovation in multidisciplinary research for the development of public policies based on evidence’ (INSP, 2016b).</p>	
<p>National Institute of Nutrition and Medical Science Salvador Zuviran (<i>Instituto Nacional de Nutrición y Ciencias Médicas Salvador Subirán - INNCMSZ</i>)</p>	<p>In 1944, the Mexican government established the INNCMSZ. This institute became responsible for working on the problem of nutrition and of diseases resulting from inadequate and insufficient food. It is an institution with highly specialized knowledge developed through research. It performs research, teaching and high quality care. The institute has been involved in the ENPCSOD as a partner in the monitoring strategy and is also involved in treating people with diabetes (INNCMSZ).</p>	<p>The institute was not directly involved in the soda tax design or discussion. However, it was appointed by the MoH to contribute to developing the part of the ENPCSOD related to patient awareness and health promotion strategies among the diabetic population and within other health institutions and hospitals.</p> <p>Despite being a public institution, several of the academics and health providers who are leading figures in public nutrition receive grants from the food and beverage industry (INNCMSZ).</p>	
<p>Center for Economic Research and Teaching (<i>Centro de Investigación y Docencia Económicas- CIDE</i>)</p>	<p>The CIDE is a public research centre and higher education centre specializing in social sciences, guided by international standards of quality (CIDE, 2016). CIDE publishes scientific works in different disciplines of science, and applied research to policy (CIDE).</p>	<p>During the soda tax debate several scholars of CIDE published opinions and views on the policy, which in general were not positive although not as strong in tone as other opinions published in national journals (Ramirez, 2016; Zaid, 2013). Some scholars of this institution were also invited to comment on the first soda tax proposal submitted to Congress in 2012.</p>	

<p>National Autonomous University of Nuevo León (<i>Universidad Nacional Autónoma de Nuevo León-UNAL</i>)</p>	<p>UNAL is the third largest university in Mexico and the most important public institution in higher education in the North-East of Mexico. It offers the largest number of academic programs in the area. Its mission is 'to educate high school students, technicians, professionals, university professors and researchers to perform efficiently in a knowledge based society with a broad sense of the meaning of life and with awareness of regional, national and global issues' (UNAL, 2016).</p>	<p>UNAL was appointed by the Ministry of Health to develop with IMCO and Aspen Institute the OMENT strategy to monitor the impact and progress of the policy actions to reduce obesity (SSA, 2016).</p> <p>UNAL was appointed in 2013 by the Ministry of Health to partner with Aspen Institute and IMCO to develop the indicators for the National Obesity Strategy and to monitor the milestones reached over time. Until the date of this research, no public information on their role was available on the University's website. However, in 2015 a report authored by members of the UNAL was released about the role of the soda industry in the country, which stated a strong opposition on the soda tax.</p>
<p>Autonomous Institute of Technology (<i>Instituto Tecnológico Autónomo de México - ITAM</i>)</p>	<p>ITAM is a private university located in Mexico City. It has undergraduate programs in Accounting, Business, Political Science, International Relations and Economics; and it has been denoted as one of the best universities of the country in economics, and business schools in Latin America (America Economía). ITAM is also considered a think tank as several opinion leaders teach there. It has produced several academics and alumni occupying government positions.</p> <p>ITAM's mission is to contribute to the integral</p>	<p>Several academic meetings were held in ITAM during the soda tax debate in 2012 and 2013. Some academics in this institution were also commissioned to write reports about the soda tax (ITAM, 2012).</p>

formation of the person
and to the development of
a 'free and prosperous
society' (ITAM, 2016). It
aspires to be an excellent
house of studies and an
autonomous research
centre of high quality.

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Annex 5: Networks and relationships identified during the policy process

Organizations	Mechanism	Type of network ^a / resources exchange ^b	Elements of governance ^c	Example	Reference to further analysis
Food and beverage constituency building with academics CSO, government and media					
a.	Personal double roles and members of advisory committees between CSO, government and industry partners				
AI + COCA-COLA + ITAM	Establishing relationships with academics, think tanks.	Issue network/ network	Accountability Participation	The chief of Coca-Cola Mexico, the dean of ITAM a well-known private university, and the Vice-President of Wal-Mart were part of the AI. Also one of the consultants is Jaime Zabudovsky, former head of CONMEXICO (The Aspen Institute)	Annex 4

IMCO + CONMEXICO + CONACYT	Establishing relationships with academics, think tanks and the government	Issue network/ cooperation	Accountability Participation	The board are President and Director of Grupo Bimbo, the largest packaged food producer in Mexico with 11.4% of the market share (Euromonitor, 2016), Jaime Zabloudovsky head of CONMEXICO, the director of National Council of Science and Technology (Consejo Nacional de Ciencia y Tecnología - CONACYT), and the Head of the Business Coordinating Council (Consejo Coordinador Empresarial - CEE) (IMCO, 2016)	Annex 4
UNAL + IMCO	UNAL soda tax impact research was sponsored by the F&BI. IMCO has in its board members of the F&BI.	Issue network/ collaboration	Accountability Participation Responsiveness	UNAL and IMCO were both appointed by the Ministry of Health to develop in coordination with Aspen Institute the OMENT strategy to monitor the impact and progress of the policy actions to reduce obesity (SSA, 2016).	
FUNSALUD + MOH	Use of the 'revolving door'. Mercedes Juan had various positions in the PRI administration (1988-94) then part of the legislative commission of health (1997-2000) and also head of FUNSALUD and industry-funded research institution.	Community network/ cooperation	Accountability Responsiveness	The head of the MoH (2013-2015) was the former head of FUNSALUD (Fundación Mexicana para la Salud-Mexican Foundation for Health) a civil society heavily funded by Nestlé (Fundación Mexicana para la Salud). (ANNEX 4 P. 6)	Chapter 5

AI + MOH	Establishing relationships with policy makers providing technical support.	Issue network/ collaboration	Accountability Responsiveness Participation	AI was appointed by the Ministry of Health as a partner on the multi-stakeholder platform to evaluate and to design the indicators of the national obesity strategy.	Chapter 5
b. Funding research in academic and governmental settings					
CONMEXICO + ITAM	Financial relationships compromising the shape evidence takes on the soda tax impact.	Issue network/collaboration	Accountability	In 2015, a year after implementation of the soda tax, they funded a report on the consequences and impact of the tax, which criticized the strategy(Aguilar et al., 2015).	Chapter 6
ANPRAC + UNAL		Issue network/collaboration	Accountability	In 2015, a year after implementation of the soda tax, they funded a report on the consequences and impact of the tax, which criticized the strategy (Chapa-Cantú et al., 2015).	Chapter 6
COCA COLA + CONACYT +FMD	Relationships through a public-private partnership collaborations aimed to shape evidence	Policy community/collaboration	Accountability Responsiveness	In 2014 several links between CONACYT, the FMD and Coca-Cola were evident by the supporting the Instituto de Bebidas para la Salud y el Bienestar (IBSB) an organization sponsored by The Coca-Cola company	Chapter 5

	about sodas and hydration			as a means to achieve social responsibility actions. In 2015 a book called 'Hydration in different life stages' (<i>Hidratación. Fundamentos en las diferentes etapas de la vida</i>) published by the IBSB was endorsed by the FMD and by other civil society groups, such as the Asociación Mexicana de Nutriología, A.C. (AMENAC) (Coca-Cola Mexico, 2015a).	
COCA COLA + AMD	Financial relationships to participate, promote research and evidence, and frame obesity problems.	Community network/ collaboration	Accountability	In 2015, they collaborated with the Coca Cola Company to host a symposium on physical activity (James, 2013).	
NESTLE + FUNSALUD	Financial relationships to promote research	Community network/ collaboration	Accountability Responsiveness	Since 1992, FUNSALUD has received funds from Nestlé (Fondo Nestlé Nutrición) for different activities. In 2012, the organization conducted research on obesity, mainly focused on promoting physical activity in schools, nutrigenomics and variations in genes associated with obesity. In addition, they conducted research on the impact of the implementation of the 2010's School Food Guidelines on the nutritional status of children (Funsalud, 2012).	Chapter 5, Annex 4

	INNSZ+ F&BI	Financial relationships to promote research and evidence and frame obesity problems.	Community network/ collaboration	Accountability Participation Responsiveness	Although they are a public institution, several of the academics and health providers who are leading figures in public nutrition receive grants from the food and beverage industry (INNCMSZ).	Chapter 5, Annex 4.
c	Collaboration with design and implementation of public policies related to health					
	BID + GOV + COCA COLA	Implement of programs to undertake corporate philanthropy	Community network/ collaboration	Accountability Participation Responsiveness	Inclusion of PepsiCo as a private partnership. BID and Pepsico partnered on a program providing water to poor communities, and Pepsico providing subsidized products for the program “Hambre Cero” program SEDESOL, and the conflict of interest arising for this partnership as the minister’s sister was head of marketing at PepsiCo.	Chapters 5 and 8
	BID + GOV + PEPSICO					Chapters 5 and 8
	PEPSICO + SEDESOL COCA COLA + SEP				The program called ‘Escuela al Cien’ and appointed a subsidiary of the MoEd called National Institute for the Educational Physical Infrastructure (Instituto Nacional de la Infraestructura Fisca Educativa - <i>INIFED</i>) to install all water fountains in schools who got funds from Coca-	Chapter 8

Cola Foundation to install them (Inifed, 2015).					Chapter 7
CONMEXICO + COFEPRIS	Build relationships by providing policy advice on nutrition policies (design of food labelling)	Policy community/ consultancy	Accountability Responsiveness Participation		
CONMEXICO + MOH	Build relationships by providing policy advice on nutrition policies (part of the monitoring strategy for the obesity policy)	Policy community/ consultancy			
UNAL + MOH	Part of the monitoring and evaluation design of indicators	Issue network / consultancy	Accountability Responsiveness Participation	UNAL was appointed by the Ministry of Health to develop with IMCO and Aspen Institute the OMENT strategy to monitor the impact and progress of the policy actions to reduce obesity (SSA, 2016).	Chapters 5 and 6
International organizations support to advocacy and research					
a	Personal double roles and members of advisory committees				
BP (funded org) + SENATE PAHO + SENATE PAHO + MOH	Collaboration in advising the policy content	Issue network	Accountability Responsiveness Participation		Chapters 5 and 8 Chapter 7 Chapter 7

b	Funding research and advocacy strategies					
	BB + EPC	Funding policy advocates to support health initiatives	Issue network	Accountability Responsiveness Participation	In the fall of 2013, they supported their partners to propose a new tax on sugar-sweetened beverages, including funding media campaigns in support of the tax (BP). The Bloomberg Philanthropies Obesity Prevention Program continues to work with public and private partners in Mexico to ensure that obesity prevention remains a topic of public discussion and policy focus (BP; Donaldson et al., 2015).	Chapter 5 Chapter 8
	BP + INSP	Funding research				
	BP + FM	Funding policy advocates to support health initiatives				
c	Support in framing the debate for the soda tax					
	WOF + EPC	Public support for the soda tax in press releases	Policy community	Responsiveness		Chapter 8
	CSPI + EPC		Policy community	Responsiveness		Chapter 8
Academic collaboration to build evidence and policy making						
	ANM + INSP	Collaboration in writing advocacy material	Issue network/ collaboration, coordination	Responsiveness	On 30 January 2013, the ANMM/UNAM presented the book <i>Obesidad en México: recomendaciones para una política de Estado</i> . It contains the main topics related to obesity, including recommendations for a policy plan to attend this epidemic.	

CIDE + INSP +SENATE	Collaboration in advising the policy content	Issue network/ collaboration, coordination	Participation	Both participated in helping the Senate legislative soda tax proposal
IMCO +INSP	Collaboration in writing advocacy material	Issue network/ collaboration	Participation Responsiveness	Publication 'Kilos de mas, pesos de menos: los costos de la obesidad' (More kilos, less pesos: the costs of obesity) published in 2015 (IMCO, 2015a)
INNSZ + MOH	Collaborations with funding research	Issue network/ collaborations.	Participation Accountability	The institute has been involved in the ENPCSOD as a partner in the monitoring strategy and is also involved in treating people with diabetes (INNCSMZ).
ITAM + INSP	Networking and cooperation to address obesity policy	Issue network	Participation Accountability Responsiveness	Several academic meetings were held in ITAM during the soda tax debate in 2012 and 2013. Some academics in this institution were also commissioned to write reports about the soda tax.
Advocacy groups links to the government organizations				
a	Advisory committees			
CONTRAPESO + SENATE	Relationships to find support of legislation within policy makers and with the CSO.	Policy community / coordination	Responsiveness Participation	La Alianza por la Salud Alimentaria as well as other organisations such as El Poder del Consumidor, La Red por los Derechos de la Infancia and la Asociación Nacional de Empresas Comercializadoras de Productos del

FUNDACION MIDETE + SENATE EPC +SENATE	Policy community / coordination	Responsiveness Participation	Camp endorsed the 20% increase to soda tax submitted to Congress (Rivera, 2013).
	Policy community /coordination	Responsiveness Participation	
<p>a) Type of network: Policy communities: Networks defining the context of policy-making in specific policy segments. The network links are generally perceived as the relational ties between bureaucrats, politicians and interest groups.</p> <p>Issue Networks Includes large number of actors. Non-state actors in these networks usually include representatives of private sector, civil society academic experts (See Chapter 3, section II Theoretical framework and Chapter 5, section I).</p> <p>b) Type of collaboration: Networking, coordination, cooperation, collaboration (Chapter 5) (Vic, 2013)</p> <p>c) Elements of governance in relation to power and the cooperation of non-state actors during policy change include participation, responsiveness, and accountability (See Chapter 3) (Siddiqi, 2009)</p>			

